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NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2	Apr 08	"Ask CAS" for self-help around the clock
NEWS 3	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 4	Apr 09	ZDB will be removed from STN
NEWS 5	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 6	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 7	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS 8	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS 9	Jun 03	New e-mail delivery for search results now available
NEWS 10	Jun 10	MEDLINE Reload
NEWS 11	Jun 10	PCTFULL has been reloaded
NEWS 12	Jul 02	FOREGE no longer contains STANDARDS file segment
NEWS 13	Jul 22	USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS 14	Jul 29	Enhanced polymer searching in REGISTRY
NEWS 15	Jul 30	NETFIRST to be removed from STN
NEWS 16	Aug 08	CANCERLIT reload
NEWS 17	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18	Aug 08	NTIS has been reloaded and enhanced
NEWS 19	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS 20	Aug 19	IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21	Aug 19	The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22	Aug 26	Sequence searching in REGISTRY enhanced
NEWS 23	Sep 03	JAPIO has been reloaded and enhanced
NEWS 24	Sep 16	Experimental properties added to the REGISTRY file
NEWS 25	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS 26	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS 27	Oct 21	EVENTLINE has been reloaded
NEWS 28	Oct 24	BEILSTEIN adds new search fields
NEWS 29	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 30	Oct 25	MEDLINE SDI run of October 8, 2002
NEWS 31	Nov 18	DKILIT has been renamed APOLLIT
NEWS 32	Nov 25	More calculated properties added to REGISTRY
NEWS 33	Dec 02	TIBKAT will be removed from STN
NEWS 34	Dec 04	CSA files on STN
NEWS 35	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 36	Dec 17	TOXCENTER enhanced with additional content
NEWS 37	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS 38	Dec 30	ISMEC no longer available
NEWS 39	Jan 13	Indexing added to some pre-1967 records in CA/CAPLUS

NEWS EXPRESS	January 6 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
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NEWS LOGIN	Welcome Banner and News Items
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NEWS WWW CAS World Wide Web Site (general information)

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* * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 15:36:37 ON 16 JAN 2003

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 15:36:53 ON 16 JAN 2003
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 15 JAN 2003 HIGHEST RN 479190-61-9
DICTIONARY FILE UPDATES: 15 JAN 2003 HIGHEST RN 479190-61-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> e aminoisophthalic

E1	8	AMINOISOPHTHALANILIDE/BI
E2	17	AMINOISOPHTHALATE/BI
E3	41 -->	AMINOISOPHTHALIC/BI
E4	3	AMINOISOPHTHALO/BI
E5	1	AMINOISOPHTHALONITRILE/BI
E6	2	AMINOISOPHTHALOYL/BI
E7	3	AMINOISOPR/BI
E8	3	AMINOISOPRENE/BI
E9	3	AMINOISOPROP/BI
E10	7	AMINOISOPROPAN/BI
E11	7	AMINOISOPROPANOL/BI
E12	3	AMINOISOPROPOXY/BI

=> s e1-e6
8 AMINOISOPHTHALANILIDE/BI

```
             17 AMINOISOPHTHALATE/BI
             41 AMINOISOPHTHALIC/BI
              3 AMINOISOPHTHALO/BI
              1 AMINOISOPHTHALONITRILE/BI
              2 AMINOISOPHTHALOYL/BI
L1           66 (AMINOISOPHTHALANILIDE/BI OR AMINOISOPHTHALATE/BI OR AMINOISOPHT
                HALIC/BI OR AMINOISOPHTHALO/BI OR AMINOISOPHTHALONITRILE/BI OR
                AMINOISOPHTHALOYL/BI)

=> s e1-e11
              8 AMINOISOPHTHALANILIDE/BI
             17 AMINOISOPHTHALATE/BI
             41 AMINOISOPHTHALIC/BI
              3 AMINOISOPHTHALO/BI
              1 AMINOISOPHTHALONITRILE/BI
              2 AMINOISOPHTHALOYL/BI
              3 AMINOISOPR/BI
              3 AMINOISOPRENE/BI
              3 AMINOISOPROP/BI
              7 AMINOISOPROPAN/BI
              7 AMINOISOPROPANOL/BI
L2           79 (AMINOISOPHTHALANILIDE/BI OR AMINOISOPHTHALATE/BI OR AMINOISOPHT
                HALIC/BI OR AMINOISOPHTHALO/BI OR AMINOISOPHTHALONITRILE/BI OR
                AMINOISOPHTHALOYL/BI OR AMINOISOPR/BI OR AMINOISOPRENE/BI OR
                AMINOISOPROP/BI OR AMINOISOPROPAN/BI OR AMINOISOPROPANOL/BI)

=> e tridecanediamine
E1            3     TRIDECANEDIAMIDINE/BI
E2            8     TRIDECANEDIAMIN/BI
E3           74 --> TRIDECANEDIAMINE/BI
E4            8     TRIDECANEDIAMINIUM/BI
E5            2     TRIDECANEDIANILIDE/BI
E6           11     TRIDECANEDICARBOXYL/BI
E7            2     TRIDECANEDICARBOXYLATE/BI
E8            9     TRIDECANEDICARBOXYLIC/BI
E9           27     TRIDECANEDIIMID/BI
E10          27     TRIDECANEDIIMIDAMIDE/BI
E11          11     TRIDECANEDINITRILE/BI
E12          69     TRIDECANEDIO/BI

=> s e1-e11
              3 TRIDECANEDIAMIDINE/BI
              8 TRIDECANEDIAMIN/BI
             74 TRIDECANEDIAMINE/BI
              8 TRIDECANEDIAMINIUM/BI
              2 TRIDECANEDIANILIDE/BI
             11 TRIDECANEDICARBOXYL/BI
              2 TRIDECANEDICARBOXYLATE/BI
              9 TRIDECANEDICARBOXYLIC/BI
             27 TRIDECANEDIIMID/BI
             27 TRIDECANEDIIMIDAMIDE/BI
             11 TRIDECANEDINITRILE/BI
L3          133 (TRIDECANEDIAMIDINE/BI OR TRIDECANEDIAMIN/BI OR TRIDECANEDIAMINE
                /BI OR TRIDECANEDIAMINIUM/BI OR TRIDECANEDIANILIDE/BI OR TRIDECA
                NEDICARBOXYL/BI OR TRIDECANEDICARBOXYLATE/BI OR TRIDECANEDICARBO
                XYLIC/BI OR TRIDECANEDIIMID/BI OR TRIDECANEDIIMIDAMIDE/BI OR
                TRIDECANEDINITRILE/BI)

=> file caplus
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
FULL ESTIMATED COST                             119.36     119.57
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FILE 'CAPLUS' ENTERED AT 15:38:57 ON 16 JAN 2003
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FILE COVERS 1907 - 16 Jan 2003 VOL 138 ISS 3
FILE LAST UPDATED: 15 Jan 2003 (20030115/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d his

(FILE 'HOME' ENTERED AT 15:36:37 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 15:36:53 ON 16 JAN 2003
E AMINOISOPHTHALIC
L1 66 S E1-E6
L2 79 S E1-E11
E TRIDECANEDIAMINE
L3 133 S E1-E11

FILE 'CAPLUS' ENTERED AT 15:38:57 ON 16 JAN 2003

=> s l2
L4 2431 L2

=> s l3
L5 439 L3

=> s l4 and l5
L6 2 L4 AND L5

=> d l6 1-2

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2000:573551 CAPLUS
DN 133:164737
TI Elastomeric-modified phenolic rosin resins for pigment binders
IN Matzinger, Michael D.; Hutter, Frederick G.
PA Westvaco Corporation, USA
SO Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1028131	A2	20000816	EP 2000-400399	20000211

EP 1028131 A3 20001025
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
US 6153693 A 20001128 US 1999-248735 19990211
PRAI US 1999-248735 A 19990211
US 1998-61693 B2 19980416

L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 1983:81520 CAPLUS
DN 98:81520
TI Tricyclic imidyl derivatives
IN Zweifel, Hans; Schilling, Walter; Storni, Angelo; Bellus, Daniel
PA Ciba-Geigy Corp. , USA
SO U.S., 13 pp. Cont.-in-part of U.S. 4,242,264.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4337200	A	19820629	US 1980-183905	19800904
	US 4242264	A	19801230	US 1979-9985	19790206
	CA 1138468	A2	19821228	CA 1982-393611	19820105
	US 4414394	A	19831108	US 1982-349419	19820216
	US 4417058	A	19831122	US 1982-349235	19820216
	US 4418199	A	19831129	US 1982-349120	19820216
	US 4418200	A	19831129	US 1982-349418	19820216
	US 4423231	A	19831227	US 1982-349119	19820216
	US 4424366	A	19840103	US 1982-349420	19820216
	US 4487942	A	19841211	US 1983-515413	19830720
	US 4486596	A	19841204	US 1983-526938	19830829
PRAI	CH 1978-1400		19780208		
	US 1979-9985		19790206		
	CA 1979-320890		19790206		
	US 1980-183905		19800904		
	US 1982-349419		19820216		
	US 1982-349420		19820216		

=> d l6 1-2 all

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2000:573551 CAPLUS
DN 133:164737
TI Elastomeric-modified phenolic rosin resins for pigment binders
IN Matzinger, Michael D.; Hutter, Frederick G.
PA Westvaco Corporation, USA
SO Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C08G008-10
ICS C08L061-06; C09D011-10
CC 37-3 (Plastics Manufacture and Processing)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1028131	A2	20000816	EP 2000-400399	20000211
	EP 1028131	A3	20001025		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 6153693	A	20001128	US 1999-248735	19990211

PRAI US 1999-248735 A 19990211
US 1998-61693 B2 19980416

AB An improved method for producing pigment binder compns. comprises reacting in a condensation re- action: (a) 50-95% of a member selected from the group consisting of rosin esters, phenolic-modified rosin esters, reactive hydrocarbon resins, and combinations thereof; (b) 2-25% of a member selected from the group consisting of polyols contg. from 2 to 6 hydroxyl groups, amines contg. from 2 to 5 amine groups, alkanolamines contg. from 2 to 6 amine groups and/or hydroxyl groups, and combinations thereof, and (c) wherein the improvement comprises the addn. of 2-50% of the reactants of a member selected from the group consisting of butadiene homopolymers contg. at least one amine group, butadiene homopolymers contg. at least one carboxyl group, butadiene homopolymers contg. at least one hydroxyl group, butadiene homopolymers contg. at least one anhydride group, butadiene homopolymers contg. at least one epoxy group, and combinations thereof, to produce the pigment binder compn. In particular, the invention relates to elastomeric-modified pigment binder compns. which exhibit properties that make them useful in formulating vehicles for lithog. printing inks and other coating applications.

ST phenolic resin elastomer modified pigment binder

IT Binders
Pigments, nonbiological
(elastomeric-modified phenolic rosin resins for pigment binders)

IT Phenolic resins, uses
Polyoxyalkylenes, uses
Tall oil rosin
RL: TEM (Technical or engineered material use); USES (Uses)
(elastomeric-modified phenolic rosin resins for pigment binders)

IT Resin acids
RL: TEM (Technical or engineered material use); USES (Uses)
(esters; elastomeric-modified phenolic rosin resins for pigment binders)

IT Butadiene rubber, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(hydroxy-terminated; elastomeric-modified phenolic rosin resins for pigment binders)

IT Inks
(lithog.; elastomeric-modified phenolic rosin resins for pigment binders)

IT Butadiene rubber, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(maleated; elastomeric-modified phenolic rosin resins for pigment binders)

IT Hydrocarbons, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(resins; elastomeric-modified phenolic rosin resins for pigment binders)

IT 9003-17-2
RL: TEM (Technical or engineered material use); USES (Uses)
(butadiene rubber, hydroxy-terminated; elastomeric-modified phenolic rosin resins for pigment binders)

IT 9003-17-2
RL: TEM (Technical or engineered material use); USES (Uses)
(butadiene rubber, maleated; elastomeric-modified phenolic rosin resins for pigment binders)

IT 50-70-4, Sorbitol, uses 56-81-5, 1,2,3-Propanetriol, uses 57-55-6, 1,2-Propanediol, uses 69-65-8, Mannitol 77-85-0 77-86-1, Tris(hydroxymethyl)aminomethane 77-99-6, Trimethylolpropane 78-24-0, Tripentaerythritol 78-90-0, 1,2-Propylene diamine **78-96-6**, Isopropanolamine 80-05-7, uses 95-54-5, o-Phenylenediamine, uses 95-80-7 96-27-5, 1-Thioglycerol 101-77-9 102-71-6, uses 102-79-4, N-Butyldiethanolamine 104-10-9, 4-Aminophenethyl alcohol 105-08-8,

1,4-Cyclohexanedimethanol 105-59-9 105-83-9 106-50-3, p-Phenylenediamine, uses 107-15-3, 1,2-Ethanediamine, uses 107-21-1, 1,2-Ethanediol, uses 107-88-0, 1,3-Butanediol 108-31-6, Maleic anhy-dride, uses 108-45-2, 1,3-Benzenediamine, uses 109-76-2, Trimethylenediamine 109-83-1, N-Methylethanolamine 110-60-1, Tetramethylene diamine 110-63-4, 1,4-Butanediol, uses 110-85-0, Piperazine, uses 110-97-4, Diisopropanolamine 111-29-5, 1,5-Pentanediol 111-40-0, Diethylene triamine 111-41-1 111-42-2, uses 111-46-6, uses 112-24-3 112-27-6 112-57-2, Tetraethylene pentamine 115-69-5, 2-Amino-2-methyl-1,3-propanediol 115-70-8, 2-Amino-2-ethyl-1,3-propanediol 115-77-5, uses 120-07-0 122-20-3, Triisopropanolamine 124-09-4, 1,6-Hexanediamine, uses 126-30-7 126-58-9, Dipentaerythritol 139-87-7, N-Ethyldiethanolamine 141-43-5, uses **143-23-7**, Bis(hexamethylene) triamine 156-87-6, 3-Amino-1-propanol 479-27-6, 1,8-Diaminonaphthalene 502-32-9, Leucinol 504-63-2, 1,3-Propanediol 584-03-2, 1,2-Butanediol 589-37-7, 1,3-Pentanediamine 616-30-8, 3-Amino-1,2-propane-diol 623-04-1, 4-Aminobenzyl alcohol 629-11-8, 1,6-Hexanediol 694-83-7, 1,2-Diaminocyclohexane 823-40-5, 2,6,-Tolylenediamine 929-06-6, 2-(2-Aminoethoxy)ethanol 1761-71-3, Bis(4-aminocyclohexyl)methane 1877-77-6, 3-Aminobenzyl alcohol 2508-29-4, 5-Amino-1-pentanol 3114-70-3, 1,4-Diaminocyclohexane 3306-06-7, 2-Amino-1-phenyl-1,3-propanediol 3385-21-5, 1,3-Diaminocyclohex-ane 4067-16-7, Pentaethylenehexam-ine 4097-89-6, Tris(aminoethyl)amine 4253-76-3, N-Stearyl trimethylene diamine 4379-13-9, Isoleucinol 4426-48-6, 1,2-Butylene diamine 4985-85-7, N-(3-Aminopropyl) dieth-anolamine 5339-85-5, 2-Aminophenethyl alcohol 6850-38-0, 2-Aminocyclohexanol 6850-39-1, 3-Aminocyclohexanol 6850-65-3, 4-Amino-cyclohexanol 7173-62-8, N-Oleyl trimethylene diamine 7568-93-6, 2-Amino-1-phenylethanol 9003-17-2D, Butadiene homopolymer, functional group-contg. 15520-10-2 16369-05-4, 2-Amino-3-methyl-1-butanol 16369-14-5, 2-Amino-1-pentanol 16397-19-6, 2-Amino-1-hexanol 23235-61-2, Ditrimethylolpropane 24800-44-0, Tripropylene glycol 25119-62-4, Styrene-allyl alcohol copolymer 25154-52-3, Nonylphenol 25265-71-8, Dipropylene glycol 25322-68-3 28631-79-0, Aminoethylpiperazine 30525-89-4, Paraformaldehyde 45007-61-2, Hexitol 48115-38-4, .alpha.-(1-Aminoethyl) benzyl alcohol 68148-42-5, Glycerol monothioglycolate
RL: TEM (Technical or engineered material use); USES (Uses)
(elastomeric-modified phenolic rosin resins for pigment binders)

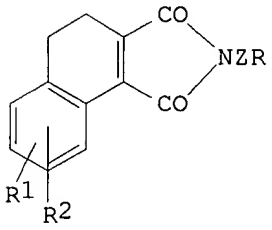
L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 1983:81520 CAPLUS
DN 98:81520
TI Tricyclic imidyl derivatives
IN Zweifel, Hans; Schilling, Walter; Storni, Angelo; Bellus, Daniel
PA Ciba-Geigy Corp. , USA
SO U.S., 13 pp. Cont.-in-part of U.S. 4,242,264.
CODEN: USXXAM
DT Patent
LA English
IC C07D209-90; C07D209-94
NCL 548451000
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4337200	A	19820629	US 1980-183905	19800904
	US 4242264	A	19801230	US 1979-9985	19790206
	CA 1138468	A2	19821228	CA 1982-393611	19820105
	US 4414394	A	19831108	US 1982-349419	19820216

	US 4417058	A	19831122	US 1982-349235	19820216
	US 4418199	A	19831129	US 1982-349120	19820216
	US 4418200	A	19831129	US 1982-349418	19820216
	US 4423231	A	19831227	US 1982-349119	19820216
	US 4424366	A	19840103	US 1982-349420	19820216
	US 4487942	A	19841211	US 1983-515413	19830720
	US 4486596	A	19841204	US 1983-526938	19830829

PRAI CH 1978-1400 19780208
US 1979-9985 19790206
CA 1979-320890 19790206
US 1980-183905 19800904
US 1982-349419 19820216
US 1982-349420 19820216

GI



I

AB A photocrosslinkable polymer suitable for prepn. of the printing plates for offset printing and as photoresists is prepd. with a tricyclic imidyl deriv. I (Z = C1-30 alkylene, C5-6 cycloalkylene, methylenebis(cyclohexylene), C6-10 arylene, C7-8 aralkylene, C7-8 alkylarylene or arylene substituted by C1-4 alkyl, C1-4 alkoxy or NO2; R = NH2, NH, C1-4 alkyl; R1,R2 = H, halogen, C1-4 alkyl or methoxy). Thus, an Al sheet support was coated with a 5% DMF soln. of a photocrosslinkable polymer obtained by copolymn. of maleic anhydride-Me vinyl ether copolymer and N-(2'-hydroxyethyl)-3,4-dihydronaphthalene-1,2-dicarboximide, dried, imagewise exposed by a 400 W Hg lamp at 40 cm distance for 6 min, and developed 3 s in THF and 30 s in 3% NaHCO3.H2O to give an image corresponding to 9 steps in a step wedge.

ST photopolymer tricyclic imidyl deriv photoresist; lithog plate photopolymer tricyclic imidyl

IT Lithographic plates
(offset, photopolymers for fabrication of, prepn. of, from tricyclic imidyl derivs.)

IT Resists
(photo-, for prepn. of photopolymers for photoresists and lithog. printing plates)

IT 72198-39-1 72198-42-6 72198-43-7 72198-46-0 72198-47-1
72198-48-2 72198-49-3 72198-50-6 72198-51-7 72198-52-8
72198-53-9 72198-54-0 72199-03-2 73005-41-1 73005-42-2
83591-34-8 83591-35-9
RL: USES (Uses)
(for prepn. of photopolymers for photoresists and lithog. plates)

IT 60-32-2 141-43-5, uses and miscellaneous 14438-56-3 26734-09-8
37845-14-0 **62351-76-2** 72198-40-4 72198-44-8 73005-43-3
74926-27-5
RL: USES (Uses)
(for prepn. of photopolymers for photoresists and lithog. printing plates)

IT 9011-16-9D, reaction products with (aminoethyl)dihydronaphthalenedicarboximide 72199-04-3 72199-05-4 72231-41-5 72231-42-6 72231-43-7
72231-44-8 83592-37-4

```
     RL: USES (Uses)
        (photoimaging compn. contg., prepn. of)
IT   72231-39-1P   72231-40-4P
     RL: PREP (Preparation)
        (prepn. of, for photoresist and lithog. plate fabrication)


=> e extracoporeal
E1            1     EXTRACOPIES/BI
E2            1     EXTRACOPORAL/BI
E3           18 --> EXTRACOPOREAL/BI
E4            1     EXTRACOPORYL/BI
E5            3     EXTRACOPROREAL/BI
E6            5     EXTRACOPY/BI
E7            2     EXTRACOR/BI
E8            1     EXTRACORDAL/BI
E9           12     EXTRACORE/BI
E10           2     EXTRACORNEAL/BI
E11           4     EXTRACORONAL/BI
E12           9     EXTRACORONARY/BI

=> e extracoporeal
E1            1     EXTRACOPIES/BI
E2            1     EXTRACOPORAL/BI
E3           18 --> EXTRACOPOREAL/BI
E4            1     EXTRACOPORYL/BI
E5            3     EXTRACOPROREAL/BI
E6            5     EXTRACOPY/BI
E7            2     EXTRACOR/BI
E8            1     EXTRACORDAL/BI
E9           12     EXTRACORE/BI
E10           2     EXTRACORNEAL/BI
E11           4     EXTRACORONAL/BI
E12           9     EXTRACORONARY/BI

=> e extracorporeal
E1            1     EXTRACORPORCALLY/BI
E2            2     EXTRACORPOREA/BI
E3         5268 --> EXTRACORPOREAL/BI
E4          133     EXTRACORPOREALLY/BI
E5            1     EXTRACORPOREALS/BI
E6            1     EXTRACORPORED/BI
E7            1     EXTRACORPOREL/BI
E8            1     EXTRACORPOREOL/BI
E9            1     EXTRACORPREAL/BI
E10          25     EXTRACORPUSCULAR/BI
E11          26     EXTRACORTICAL/BI
E12           1     EXTRACOTYLEDONARY/BI

=> s e1-e11
             1 EXTRACORPORCALLY/BI
             2 EXTRACORPOREA/BI
          5268 EXTRACORPOREAL/BI
           133 EXTRACORPOREALLY/BI
             1 EXTRACORPOREALS/BI
             1 EXTRACORPORED/BI
             1 EXTRACORPOREL/BI
             1 EXTRACORPOREOL/BI
             1 EXTRACORPREAL/BI
            25 EXTRACORPUSCULAR/BI
            26 EXTRACORTICAL/BI
L7       5405 (EXTRACORPORCALLY/BI OR EXTRACORPOREA/BI OR EXTRACORPOREAL/BI
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                OR EXTRACORPOREALLY/BI OR EXTRACORPOREALS/BI OR EXTRACORPORED/BI
                 OR EXTRACORPOREL/BI OR EXTRACORPOREOL/BI OR EXTRACORPREAL/BI
                OR EXTRACORPUSCULAR/BI OR EXTRACORTICAL/BI)

=> d his

     (FILE 'HOME' ENTERED AT 15:36:37 ON 16 JAN 2003)

     FILE 'REGISTRY' ENTERED AT 15:36:53 ON 16 JAN 2003
                E AMINOISOPHTHALIC
L1            66 S E1-E6
L2            79 S E1-E11
                E TRIDECANEDIAMINE
L3           133 S E1-E11

     FILE 'CAPLUS' ENTERED AT 15:38:57 ON 16 JAN 2003
L4          2431 S L2
L5           439 S L3
L6             2 S L4 AND L5
                E EXTRACOPOREAL
                E EXTRACOPOREAL
                E EXTRACORPOREAL
L7          5405 S E1-E11

=> s l4 and l7
L8             4 L4 AND L7

=> d l8 1-4

L8   ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:523951  CAPLUS
DN   137:228855
TI   Trifunctional conjugation reagents. Reagents that contain a biotin and a
     radiometal chelation moiety for application to extracorporeal
     affinity adsorption of radiolabeled antibodies
AU   Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.;
     Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin
CS   Department of Radiation Oncology, University of Washington, Seattle, WA,
     98195, USA
SO   Bioconjugate Chemistry (2002), 13(5), 1079-1092
     CODEN: BCCHES; ISSN: 1043-1802
PB   American Chemical Society
DT   Journal
LA   English
RE.CNT  62    THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8   ANSWER 2 OF 4  CAPLUS  COPYRIGHT 2003 ACS
AN   2001:923565  CAPLUS
DN   136:42919
TI   Biotin derivatives for an extracorporeal device
IN   Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
PA   Mitra Medical Technology AB, Swed.; University of Washington
SO   PCT Int. Appl., 45 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.         KIND  DATE          APPLICATION NO.  DATE
     ---------------    ----  --------      ---------------  --------
PI   WO 2001095857      A2    20011220      WO 2001-SE1374   20010618
     WO 2001095857      A3    20020328
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         W:  AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES,
             FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
             KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
             MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ,
             TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG,
             KZ, MD, RU, TJ
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     US 2002159994     A1   20021031       US 2001-881213   20010615
     AU 2001074761     A5   20011224       AU 2001-74761    20010618
PRAI SE 2000-2287      A    20000616
     US 2000-216625P   P    20000707
     WO 2001-SE1374    W    20010618

L8   ANSWER 3 OF 4  CAPLUS  COPYRIGHT 2003 ACS
AN   2000:35037  CAPLUS
DN   132:90367
TI   Trifunctional reagent for conjugation to a biomolecule for use in
     diagnosis and therapy
IN   Wilbur, D. Scott; Sandberg, Bengt E. B.
PA   Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical
     Technology AB
SO   PCT Int. Appl., 48 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 2
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
PI   WO 2000002051     A1   20000113       WO 1999-SE1241   19990707
         W:  AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU,
             CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM,
             HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
             LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,
             SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU,
             ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
             ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
             CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     WO 2000002050     A1   20000113       WO 1998-SE1345   19980707
         W:  AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
             CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR,
             HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
             LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG,
             SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
             FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
             CM, GA, GN, ML, MR, NE, SN, TD, TG
     CA 2336739        AA   20000113       CA 1999-2336739  19990707
     AU 9950767        A1   20000124       AU 1999-50767    19990707
     EP 1095274        A1   20010502       EP 1999-935251   19990707
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     JP 2002519440     T2   20020702       JP 2000-558395   19990707
     US 2001023288     A1   20010920       US 2000-750280   20001229
     NO 2001000021     A    20010307       NO 2001-21       20010103
PRAI WO 1998-SE1345    A    19980707
     WO 1999-SE1241    W    19990707
RE.CNT  13    THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
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ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2000:35036 CAPLUS
DN 132:90366
TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy
IN Wilbur, D. Scott; Sandberg, Bengt E. B.
PA Department of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9883663	A1	20000124	AU 1998-83663	19980707
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 15:36:37 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 15:36:53 ON 16 JAN 2003
E AMINOISOPHTHALIC
L1 66 S E1-E6
L2 79 S E1-E11
E TRIDECANEDIAMINE
L3 133 S E1-E11

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     FILE 'CAPLUS' ENTERED AT 15:38:57 ON 16 JAN 2003
L4         2431 S L2
L5          439 S L3
L6            2 S L4 AND L5
                E EXTRACOPOREAL
                E EXTRACOPOREAL
                E EXTRACORPOREAL
L7         5405 S E1-E11
L8            4 S L4 AND L7

=> s l5 and l7
L9            0 L5 AND L7

=> d 130:267698 all

ANSWER 1  CAPLUS  COPYRIGHT 2003 ACS
AN   130:267698  CAPLUS
TI   Synthesis of achiral linker reagents for direct labeling of
     oligonucleotides on solid supports
AU   Behrens, Carsten; Dahl, Otto
CS   Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100,
     Den.
SO   Nucleosides & Nucleotides (1999), 18(2), 291-305
     CODEN: NUNUD5; ISSN: 0732-8311
PB   Marcel Dekker, Inc.
DT   Journal
LA   English
CC   33-10 (Carbohydrates)
     Section cross-reference(s): 9
AB   Full exptl. procedures for the synthesis of a series of new functional
     linker reagents and solid supports are reported.  The achiral linker
     reagents and supports can be used for high yield incorporation of free
     amino groups, fluorescein or biotin into DNA oligomers.
ST   achiral amino linker oligonucleotide solidphase prepn fluorescent label;
     hybridization oligonucleotide achiral amino linker
IT   Solid phase synthesis
        (of oligonucleotides contg. achiral amino linker reagents for direct
        labeling)
IT   Nucleic acid hybridization
        (of oligonucleotides contg. achiral amino linker units)
IT   Fluorescent substances
        (prepn. of using achiral amino linker reagents for direct labeling of
        oligonucleotides)
IT   Oligonucleotides
     RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP
     (Preparation); RACT (Reactant or reagent)
        (synthesis of achiral amino linker reagents for direct labeling of
        oligonucleotides on solid supports)
IT   99-31-0P   42122-73-6P   71176-54-0P   146335-23-1P   147190-36-1P
     171082-06-7P   171082-07-8P   171082-08-9DP, solid-supported
     171082-09-0P   188257-47-8P   188257-52-5P   188257-53-6DP,
     solid-supported   188257-54-7P   188257-55-8P   188257-56-9DP,
     solid-supported   221318-06-5P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (prepn. and reaction of in the synthesis of achiral amino linker
        reagents for direct labeling of oligonucleotides on solid supports)
IT   171717-18-3P   171717-19-4P   171717-20-7P   171717-21-8P   171717-22-9P
     171844-08-9P   188366-81-6P   188366-82-7P   188366-83-8P   188366-85-0P
     188366-86-1P   188420-41-9P   188420-42-0P   188420-43-1P   188420-44-2P
     222054-01-5P   222054-02-6P   222054-03-7P   222054-04-8P   222054-05-9P
     RL: SPN (Synthetic preparation); PREP (Preparation)
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(prepn. of using achiral amino linker reagents for direct labeling of oligonucleotides on solid supports)
IT 221889-90-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents in one chain and effect on hybridization)
IT 221889-92-5P 221889-94-7P 221889-96-9P 221889-98-1P 221890-00-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents in one chain and effect on hybridization)
IT 618-88-2 3282-30-2, Pivaloyl chloride 3326-32-7 28920-43-6, 9-Fluorenylmethyl chloroformate 35013-72-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of in the synthesis of achiral amino linker reagents for direct labeling of oligonucleotides on solid supports)
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Bannwarth, W; Helv Chim Acta 1987, V70, P175 CAPLUS
(2) Beaucage, S; Protocols for Oligonucleotide Conjugates Synthesis and Analytical Techniques 1994
(3) Beaucage, S; Tetrahedron 1993, V49, P1925 CAPLUS
(4) Behrens, C; Bioorg Med Chem Lett 1995, V5, P1785 CAPLUS
(5) Chu, B; DNA 1985, V4, P327 CAPLUS
(6) Nelson, P; Nucleic Acid Res 1992, V20, P6253 CAPLUS
(7) Perich, J; Tetrahedron Lett 1987, V28, P101 CAPLUS
(8) Smith, L; Nucleic Acid Res 1985, V13, P2399 CAPLUS
(9) Tarrason, G; Antisense Research and Development 1995, V5, P193 CAPLUS
(10) Wachter, L; Nucleic Acid Res 1986, V14, P7985 CAPLUS

=> d 126:207193 all

ANSWER 1 CAPLUS COPYRIGHT 2003 ACS
AN 126:207193 CAPLUS
TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon; Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(2), 161-172
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
CC 1-6 (Pharmacology)
Section cross-reference(s): 78
AB Several cobalamin (Cbl) dimers have been prepd. for evaluation as potential antiproliferative agents in the treatment of AIDS-related lymphoma. The Cbl dimers were synthesized by crosslinking Cbl carboxylates, produced by acid hydrolysis of the b-, d-, and e-propionamide side chains of cyanocobalamin (CN-Cbl), through an isophthalate mol. Linking mols. were used between the Cbl carboxylates and the isophthalate moiety. The linkers were incorporated to provide a distance between the two Cbl mols. such that the dimeric Cbls might bind two mols. of transcobalamin II (TCII), the Cbl transport protein in plasma. Initially, the linking moiety used was 1,12-diaminododecane, but the resulting dimers had low aq. soly. To improve the soly. of the dimers, 4,7,10-trioxa-1,13-tridecanediamine was employed as the linking moiety. This improved the water soly. of the dimers considerably, while retaining the distance between the Cbl mols. at 41-42 .ANG. (fully extended). To introduce addnl. substitution on Cbl dimers,

5-aminoisophthalic acid was used as the crosslinking reagent. P-Iodobenzoyl and p-(tri-n-butylstannyl)benzoyl conjugates of 5-aminoisophthalate were synthesized and used to prep. Cbl dimers. The stannylbenzoyl-conjugated Cbl dimers were prepd. as precursors to be used in radioiodination reactions, and the iodobenzoyl-conjugated Cbl dimers were prepd. as HPLC stds. for the radioiodinated product. Attempts to iodinate/radioiodinate the stannylbenzoyl Cbl dimers were unsuccessful. Although an explanation for this is not readily apparent, the failure to react may be due to the lipophilicity of the linker used and the steric environment of the two Cbl moieties. A biotinylated deriv. of 5-aminoisophthalate was also synthesized and used to prep. biotinylated-Cbl dimers. In a competitive rhTCII binding assay with [57Co]CN-Cbl, Cbl dimers contg. the lipophilic diaminododecane linking moiety had decreased binding avidities compared to those of Cbl monomers substituted at the same corrin ring carboxylate. However, Cbl dimers contg. the water-solubilizing trioxadiamine linker appeared to have avidities similar to those of the Cbl monomers.

ST cobalamin dimer prepn transcobalamin binding

IT 173341-40-7P 173341-41-8P 173341-42-9P 173341-43-0P 173341-44-1P
173341-46-3P 173341-47-4P 173341-48-5P 173341-52-1P 173341-53-2P
173341-54-3P 188014-66-6P 188014-67-7P 188014-68-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)

IT 12651-28-4, Transcobalamin II
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)

IT 68-19-9P, Cyanocobalamin
RL: PUR (Purification or recovery); PREP (Preparation)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)

IT 58-85-5P, Biotin 99-31-0P 26264-28-8P 38218-55-2P 38218-77-8P
160927-56-0P 173341-26-9P 173341-31-6P 173341-49-6P 173341-51-0P
173341-59-8P 188014-58-6P 188014-59-7P 188014-60-0P 188014-61-1P
188014-62-2P 188014-63-3P 188014-64-4P 188014-65-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)

=> d 126:3868 ALL

ANSWER 1 CAPLUS COPYRIGHT 2003 ACS

AN 126:3868 CAPLUS

TI Antibody Fragments in Tumor Pretargeting. Evaluation of Biotinylated Fab' Colocalization with Recombinant Streptavidin and Avidin

AU Wilbur, D. Scott; Hamlin, Donald K.; Vessella, Robert L.; Stray, James E.; Buhler, Kent R.; Stayton, Patrick S.; Klumb, Lisa A.; Pathare, Pradip M.; Weerawarna, S. Ananda

CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA

SO Bioconjugate Chemistry (1996), 7(6), 689-702
CODEN: BCCHES; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

CC 8-9 (Radiation Biochemistry)

Section cross-reference(s): 14

AB An evaluation of the use of a biotinylated monoclonal antibody Fab' fragment in tumor pretargeting was conducted. As a model system, tumor colocalization of avidin or recombinant streptavidin (r-streptavidin) and the biotinylated Fab' fragment (Fab'-S-biotin) of A6H, an antirenal cell carcinoma antibody, was evaluated in athymic mice bearing human renal cell carcinoma xenografts. A new water sol. sulfhydryl reactive biotinylation reagent, N-(13-N-maleimido-4,7,10-trioxatridecanyl)biotinamide, was synthesized and used for biotinylation of Fab'. A biodistribution of ChT-labeled A6H Fab'-S-biotin was conducted. Data from that distribution indicated that the Fab'-S-biotin localized well (i.e. 28% ID/g at 24 h) to human tumor xenografts in athymic mice. Subsequently, a biodistribution study involving pretargeting radioiodinated A6H Fab'-S-biotin to tumor xenografts, followed by administration of r-streptavidin at 4 or 20 h, was conducted. Specific colocalization of r-streptavidin to tumors contg. the A6H Fab'-S-biotin was evident from the data obtained. In a similar biodistribution study, specific colocalization of avidin to tumors pretargeted with A6H Fab'-S-biotin was also obsd. The avidin used in the study was radioiodinated with the N-hydroxysuccinimidyl ester of p-[125I]iodobenzoate ([125I]PIB-NHS). Very low concns. (e.g. 0.35% ID/g) of avidin colocalized at the tumor. To further show that specific colocalization within the tumor xenografts had occurred with biotinylated A6H Fab', radioiodinated avidin and r-streptavidin were co-injected into athymic mice bearing tumor xenografts to obtain their distributions without having biotinylated Fab' present. At 20 h postinjection, only small differences in the blood and tumor concns. of either protein were obsd., indicating that the specific tumor colocalization seen in the previous two biodistributions must have been due to the presence of Fab'-S-biotin. Calcns. were conducted to est. how much r-streptavidin (as a molar ratio) was colocalized. From the data obtained it was estd. that 36-61% of the tumor-localized Fab'-S-biotin mols. were bound with r-streptavidin and 4-23% bound with avidin, under the conditions studied.

ST tumor pretargeting biotinylated monoclonal antibody

IT Antibodies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(monoclonal, Fab', biotinylated; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT Avidins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT Kidney, neoplasm
(renal cell carcinoma; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 173341-32-7P 183896-00-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 4246-51-9, 4,7,10-Trioxa-1,13-tridecanediamine 55750-48-6, N-Methoxycarbonylmaleimide 142685-25-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 9013-20-1, Streptavidin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(Uses)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)
IT 58-85-5, Biotin
RL: RCT (Reactant); RACT (Reactant or reagent)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)
IT 183896-02-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

=> D 127:12587 ALL

ANSWER 1 CAPLUS COPYRIGHT 2003 ACS
AN 127:12587 CAPLUS
TI Application of laser to the pretreatment of glass carbon electrode
AU Liu, Bin; Jinrui, Xu; Huang, Mialiang; Lin, Jianming
CS Dept. Applied Chemistry, Huaqiao Univ., Quanzhou, 362011, Peop. Rep. China
SO Huaqiao Daxue Xuebao, Ziran Kexueban (1996), 17(4), 362-364
CODEN: HDZIEF; ISSN: 1000-5013
PB Huaqiao Daxue
DT Journal
LA Chinese
CC 79-2 (Inorganic Analytical Chemistry)
Section cross-reference(s): 72, 73
AB The C electrodes for electroanal. were treated with laser. The effect of pulse width, pulse energy, and irradn. time of laser on the preconcn. of Pb2+ in aq. (NH4)2SO4 and the anodic striping currents was studied. The stability, sensitivity, and reproducibility of C electrode were improved when the electrode was treated with a laser beam of 514.5 nm and a pulse width 25 ms for 2 min.
ST carbon electrode laser treatment electrochem analysis
IT Electrodes
Lasers
Voltammetry
(laser pretreatment of glass carbon electrode)
IT 7439-92-1, Lead, analysis
RL: ANT (Analyte); ANST (Analytical study)
(laser pretreatment of glass carbon electrode)
IT 7440-44-0, Carbon, uses
RL: DEV (Device component use); USES (Uses)
(laser pretreatment of glass carbon electrode)

=> D HIS

(FILE 'HOME' ENTERED AT 15:36:37 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 15:36:53 ON 16 JAN 2003
E AMINOISOPHTHALIC
L1 66 S E1-E6
L2 79 S E1-E11
E TRIDECANEDIAMINE
L3 133 S E1-E11

FILE 'CAPLUS' ENTERED AT 15:38:57 ON 16 JAN 2003
L4 2431 S L2
L5 439 S L3
L6 2 S L4 AND L5
E EXTRACOPOREAL

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                E EXTRACOPOREAL
                E EXTRACORPOREAL
L7          5405 S E1-E11
L8             4 S L4 AND L7
L9             0 S L5 AND L7

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STN INTERNATIONAL LOGOFF AT 15:54:06 ON 16 JAN 2003
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AN 130:267698 CAPLUS
TI Synthesis of achiral linker reagents for direct labeling of oligonucleotides on solid supports
AU Behrens, Carsten; Dahl, Otto
CS Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100, Den.
SO Nucleosides & Nucleotides (1999), 18(2), 291-305
CODEN: NUNUD5; ISSN: 0732-8311
PB Marcel Dekker, Inc.
DT Journal
LA English
CC 33-10 (Carbohydrates)
Section cross-reference(s): 9
AB Full exptl. procedures for the synthesis of a series of new functional linker reagents and solid supports are reported. The achiral linker reagents and supports can be used for high yield incorporation of free amino groups, fluorescein or biotin into DNA oligomers.
ST achiral amino linker oligonucleotide solidphase prepn fluorescent label; hybridization oligonucleotide achiral amino linker
IT Solid phase synthesis
(of oligonucleotides contg. achiral amino linker reagents for direct labeling)
IT Nucleic acid hybridization
(of oligonucleotides contg. achiral amino linker units)
IT Fluorescent substances
(prepn. of using achiral amino linker reagents for direct labeling of oligonucleotides)
IT Oligonucleotides
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of achiral amino linker reagents for direct labeling of oligonucleotides on solid supports)
IT 99-31-0P 42122-73-6P 71176-54-0P 146335-23-1P 147190-36-1P 171082-06-7P 171082-07-8P 171082-08-9DP, solid-supported 171082-09-0P 188257-47-8P 188257-52-5P 188257-53-6DP, solid-supported 188257-54-7P 188257-55-8P 188257-56-9DP, solid-supported 221318-06-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of in the synthesis of achiral amino linker reagents for direct labeling of oligonucleotides on solid supports)
IT 171717-18-3P 171717-19-4P 171717-20-7P 171717-21-8P 171717-22-9P 171844-08-9P 188366-81-6P 188366-82-7P 188366-83-8P 188366-85-0P 188366-86-1P 188420-41-9P 188420-42-0P 188420-43-1P 188420-44-2P 222054-01-5P 222054-02-6P 222054-03-7P 222054-04-8P 222054-05-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents for direct labeling of oligonucleotides on solid supports)
IT 221889-90-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents in one chain and effect on hybridization)
IT 221889-92-5P 221889-94-7P 221889-96-9P 221889-98-1P 221890-00-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents in one chain and effect on hybridization)
IT 618-88-2 3282-30-2, Pivaloyl chloride 3326-32-7 28920-43-6, 9-Fluorenylmethyl chloroformate 35013-72-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of in the synthesis of achiral amino linker reagents for direct labeling of oligonucleotides on solid supports)
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Bannwarth, W; Helv Chim Acta 1987, V70, P175 CAPLUS
(2) Beaucage, S; Protocols for Oligonucleotide Conjugates Synthesis and Analytical Techniques 1994
(3) Beaucage, S; Tetrahedron 1993, V49, P1925 CAPLUS
(4) Behrens, C; Bioorg Med Chem Lett 1995, V5, P1785 CAPLUS
(5) Chu, B; DNA 1985, V4, P327 CAPLUS
(6) Nelson, P; Nucleic Acid Res 1992, V20, P6253 CAPLUS
(7) Perich, J; Tetrahedron Lett 1987, V28, P101 CAPLUS
(8) Smith, L; Nucleic Acid Res 1985, V13, P2399 CAPLUS
(9) Tarrason, G; Antisense Research and Development 1995, V5, P193 CAPLUS
(10) Wachter, L; Nucleic Acid Res 1986, V14, P7985 CAPLUS

=>

AN 126:3868 CAPLUS
TI Antibody Fragments in Tumor Pretargeting. Evaluation of Biotinylated Fab' Colocalization with Recombinant Streptavidin and Avidin
AU Wilbur, D. Scott; Hamlin, Donald K.; Vessella, Robert L.; Stray, James E.; Buhler, Kent R.; Stayton, Patrick S.; Klumb, Lisa A.; Pathare, Pradip M.; Weerawarna, S. Ananda
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1996), 7(6), 689-702
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
CC 8-9 (Radiation Biochemistry)
Section cross-reference(s): 14
AB An evaluation of the use of a biotinylated monoclonal antibody Fab' fragment in tumor pretargeting was conducted. As a model system, tumor colocalization of avidin or recombinant streptavidin (r-streptavidin) and the biotinylated Fab' fragment (Fab'-S-biotin) of A6H, an antirenal cell carcinoma antibody, was evaluated in athymic mice bearing human renal cell carcinoma xenografts. A new water sol. sulfhydryl reactive biotinylation reagent, N-(13-N-maleimido-4,7,10-trioxatridecanyl)biotinamide, was synthesized and used for biotinylation of Fab'. A biodistribution of ChT-labeled A6H Fab'-S-biotin was conducted. Data from that distribution indicated that the Fab'-S-biotin localized well (i.e. 28% ID/g at 24 h) to human tumor xenografts in athymic mice. Subsequently, a biodistribution study involving pretargeting radioiodinated A6H Fab'-S-biotin to tumor xenografts, followed by administration of r-streptavidin at 4 or 20 h, was conducted. Specific colocalization of r-streptavidin to tumors contg. the A6H Fab'-S-biotin was evident from the data obtained. In a similar biodistribution study, specific colocalization of avidin to tumors pretargeted with A6H Fab'-S-biotin was also obsd. The avidin used in the study was radioiodinated with the N-hydroxysuccinimidyl ester of p-[125I]iodobenzoate ([125I]PIB-NHS). Very low concns. (e.g. 0.35% ID/g) of avidin colocalized at the tumor. To further show that specific colocalization within the tumor xenografts had occurred with biotinylated A6H Fab', radioiodinated avidin and r-streptavidin were co-injected into athymic mice bearing tumor xenografts to obtain their distributions without having biotinylated Fab' present. At 20 h postinjection, only small differences in the blood and tumor concns. of either protein were obsd., indicating that the specific tumor colocalization seen in the previous two biodistributions must have been due to the presence of Fab'-S-biotin. Calcns. were conducted to est. how much r-streptavidin (as a molar ratio) was colocalized. From the data obtained it was estd. that 36-61% of the tumor-localized Fab'-S-biotin mols. were bound with r-streptavidin and 4-23% bound with avidin, under the conditions studied.
ST tumor pretargeting biotinylated monoclonal antibody
IT Antibodies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(monoclonal, Fab', biotinylated; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)
IT Avidins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)
IT Kidney, neoplasm
(renal cell carcinoma; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and

avidin)

IT 173341-32-7P 183896-00-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 4246-51-9, 4,7,10-Trioxa-1,13-tridecanediamine 55750-48-6, N-Methoxycarbonylmaleimide 142685-25-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 9013-20-1, Streptavidin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 58-85-5, Biotin
RL: RCT (Reactant); RACT (Reactant or reagent)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 183896-02-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

=>

AN 126:207193 CAPLUS
TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon; Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(2), 161-172
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
CC 1-6 (Pharmacology)
Section cross-reference(s): 78
AB Several cobalamin (Cbl) dimers have been prepd. for evaluation as potential antiproliferative agents in the treatment of AIDS-related lymphoma. The Cbl dimers were synthesized by crosslinking Cbl carboxylates, produced by acid hydrolysis of the b-, d-, and e-propionamide side chains of cyanocobalamin (CN-Cbl), through an isophthalate mol. Linking mols. were used between the Cbl carboxylates and the isophthalate moiety. The linkers were incorporated to provide a distance between the two Cbl mols. such that the dimeric Cbls might bind two mols. of transcobalamin II (TCII), the Cbl transport protein in plasma. Initially, the linking moiety used was 1,12-diaminododecane, but the resulting dimers had low aq. soly. To improve the soly. of the dimers, 4,7,10-trioxa-1,13-tridecanediamine was employed as the linking moiety. This improved the water soly. of the dimers considerably, while retaining the distance between the Cbl mols. at 41-42 .ANG. (fully extended). To introduce addnl. substitution on Cbl dimers, 5-aminoisophthalic acid was used as the crosslinking reagent. P-Iodobenzoyl and p-(tri-n-butylstannyl)benzoyl conjugates of 5-aminoisophthalate were synthesized and used to prep. Cbl dimers. The stannylbenzoyl-conjugated Cbl dimers were prepd. as precursors to be used in radioiodination reactions, and the iodobenzoyl-conjugated Cbl dimers were prepd. as HPLC stds. for the radioiodinated product. Attempts to iodinate/radioiodinate the stannylbenzoyl Cbl dimers were unsuccessful. Although an explanation for this is not readily apparent, the failure to react may be due to the lipophilicity of the linker used and the steric environment of the two Cbl moieties. A biotinylated deriv. of 5-aminoisophthalate was also synthesized and used to prep. biotinylated-Cbl dimers. In a competitive rhTCII binding assay with [57Co]CN-Cbl, Cbl dimers contg. the lipophilic diaminododecane linking moiety had decreased binding avidities compared to those of Cbl monomers substituted at the same corrin ring carboxylate. However, Cbl dimers contg. the water-solubilizing trioxadiamine linker appeared to have avidities similar to those of the Cbl monomers.
ST cobalamin dimer prepn transcobalamin binding
IT 173341-40-7P 173341-41-8P 173341-42-9P 173341-43-0P 173341-44-1P
173341-46-3P 173341-47-4P 173341-48-5P 173341-52-1P 173341-53-2P
173341-54-3P 188014-66-6P 188014-67-7P 188014-68-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)
IT 12651-28-4, Transcobalamin II
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)
IT 68-19-9P, Cyanocobalamin
RL: PUR (Purification or recovery); PREP (Preparation)

(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)

IT 58-85-5P, Biotin 99-31-0P 26264-28-8P 38218-55-2P 38218-77-8P
160927-56-0P 173341-26-9P 173341-31-6P 173341-49-6P 173341-51-0P
173341-59-8P 188014-58-6P 188014-59-7P 188014-60-0P 188014-61-1P
188014-62-2P 188014-63-3P 188014-64-4P 188014-65-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)

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NEWS 20	Aug 19	IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21	Aug 19	The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22	Aug 26	Sequence searching in REGISTRY enhanced
NEWS 23	Sep 03	JAPIO has been reloaded and enhanced
NEWS 24	Sep 16	Experimental properties added to the REGISTRY file
NEWS 25	Sep 16	CA Section Thesaurus available in CAPLUS and CA
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NEWS 27	Oct 21	EVENTLINE has been reloaded
NEWS 28	Oct 24	BEILSTEIN adds new search fields
NEWS 29	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 30	Oct 25	MEDLINE SDI run of October 8, 2002
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NEWS 32	Nov 25	More calculated properties added to REGISTRY
NEWS 33	Dec 02	TIBKAT will be removed from STN
NEWS 34	Dec 04	CSA files on STN
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NEWS 37	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS 38	Dec 30	ISMEC no longer available
NEWS 39	Jan 13	Indexing added to some pre-1967 records in CA/CAPLUS

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=> e aminoisophthalic
E1            8     AMINOISOPHTHALANILIDE/BI
E2           17     AMINOISOPHTHALATE/BI
E3           41 --> AMINOISOPHTHALIC/BI
E4            3     AMINOISOPHTHALO/BI
E5            1     AMINOISOPHTHALONITRILE/BI
E6            2     AMINOISOPHTHALOYL/BI
E7            3     AMINOISOPR/BI
E8            3     AMINOISOPRENE/BI
E9            3     AMINOISOPROP/BI
E10           7     AMINOISOPROPAN/BI
E11           7     AMINOISOPROPANOL/BI
E12           3     AMINOISOPROPOXY/BI

=> s e1-e6
              8 AMINOISOPHTHALANILIDE/BI
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            17 AMINOISOPHTHALATE/BI
            41 AMINOISOPHTHALIC/BI
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             1 AMINOISOPHTHALONITRILE/BI
             2 AMINOISOPHTHALOYL/BI
L1          66 (AMINOISOPHTHALANILIDE/BI OR AMINOISOPHTHALATE/BI OR AMINOISOPHT
               HALIC/BI OR AMINOISOPHTHALO/BI OR AMINOISOPHTHALONITRILE/BI OR
               AMINOISOPHTHALOYL/BI)

=> d l1 66

L1   ANSWER 66 OF 66  REGISTRY  COPYRIGHT 2003 ACS
RN   99-27-4  REGISTRY
CN   1,3-Benzenedicarboxylic acid, 5-amino-, dimethyl ester (9CI)  (CA INDEX
     NAME)
OTHER CA INDEX NAMES:
CN   Isophthalic acid, 5-amino-, dimethyl ester (7CI, 8CI)
OTHER NAMES:
CN   3,5-Dicarbomethoxyaniline
CN   5-Aminobenzene-1,3-dicarboxylic acid dimethyl ester
CN   5-Aminoisophthalic acid dimethyl ester
CN   Dimethyl 5-aminobenzene-1,3-dicarboxylate
CN   Dimethyl 5-aminoisophthalate
CN   Methyl 5-amino-3-(methoxycarbonyl)benzoate
FS   3D CONCORD
DR   50891-97-9
MF   C10 H11 N O4
CI   COM
LC   STN Files:   BEILSTEIN*, BIOBUSINESS, CA, CAOLD, CAPLUS, CASREACT,
       CHEMCATS, CHEMLIST, CSCHEM, HODOC*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS,
       SPECINFO, SYNTHLINE, TOXCENTER, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources:   EINECS**, NDSL**, TSCA**
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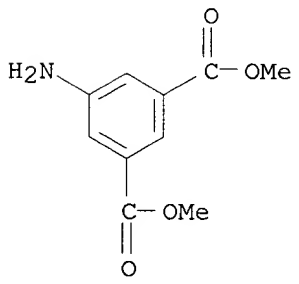


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              3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             93 REFERENCES IN FILE CAPLUS (1962 TO DATE)
              3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d l1 1

L1   ANSWER 1 OF 66  REGISTRY  COPYRIGHT 2003 ACS
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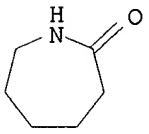
RN 306305-22-6 REGISTRY
CN 1,3-Benzenedicarboxylic acid, 5-amino-, polymer with 3-aminobenzoic acid and hexahydro-2H-azepin-2-one (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-Azepin-2-one, hexahydro-, polymer with 5-amino-1,3-benzenedicarboxylic acid and 3-aminobenzoic acid (9CI)
CN Benzoic acid, 3-amino-, polymer with 5-amino-1,3-benzenedicarboxylic acid and hexahydro-2H-azepin-2-one (9CI)
OTHER NAMES:
CN **m-Aminobenzoic acid-caprolactam-5-aminoisophthalic acid copolymer**
MF (C8 H7 N O4 . C7 H7 N O2 . C6 H11 N O)x
CI PMS
PCT Polyamide, Polyamide formed
SR CA
LC STN Files: CA, CAPLUS

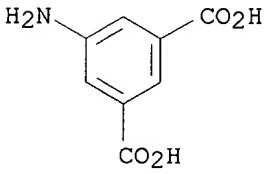
CM 1

CRN 105-60-2
CMF C6 H11 N O



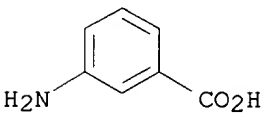
CM 2

CRN 99-31-0
CMF C8 H7 N O4



CM 3

CRN 99-05-8
CMF C7 H7 N O2



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1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

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REGISTRY
ENTER A FILE NAME OR (ALL):l1
FILE 'L1' IS NOT VALID IN THE CURRENT FILE ENVIRONMENT
REGISTRY
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L2            0 CAPLUS

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FILE COVERS 1907 - 16 Jan 2003  VOL 138 ISS 3
FILE LAST UPDATED: 15 Jan 2003  (20030115/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> s l1
L3          597 L1

=> e biotin
E1            1     BIOTIMERS/BI
E2            1     BIOTIMES/BI
E3        22854 --> BIOTIN/BI
E4            1     BIOTIN10/BI
E5            1     BIOTIN14C/BI
E6            1     BIOTINA/BI
E7            1     BIOTINAAPFCMK/BI
E8            2     BIOTINALYTED/BI
E9           63     BIOTINAMIDE/BI
E10           1     BIOTINAMIDE27/BI
E11           1     BIOTINAMIDECAPROATE/BI
E12           3     BIOTINAMIDES/BI

=> s e3
L4        22854 BIOTIN/BI

=> s l3 and l4
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L5 15 L3 AND L4

=> d 15

L5 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2002:523951 CAPLUS
DN 137:228855
TI Trifunctional conjugation reagents. Reagents that contain a **biotin** and a radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies
AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.; Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (2002), 13(5), 1079-1092
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 15 1-15

L5 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2002:523951 CAPLUS
DN 137:228855
TI Trifunctional conjugation reagents. Reagents that contain a **biotin** and a radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies
AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.; Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (2002), 13(5), 1079-1092
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2002:319261 CAPLUS
DN 137:59601
TI A Streptavidin-**Biotin** Binding System That Minimizes Blocking by Endogenous **Biotin**
AU Hamblett, Kevin J.; Kegley, Brian B.; Hamlin, Don K.; Chyan, Ming-Kuan; Hyre, David E.; Press, Oliver W.; Wilbur, D. Scott; Stayton, Patrick S.
CS Departments of Bioengineering, Medicine, and Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (2002), 13(3), 588-598
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2001:923565 CAPLUS

DN 136:42919
TI **Biotin** derivatives for an extracorporeal device
IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
PA Mitra Medical Technology AB, Swed.; University of Washington
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		
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	US 2002159994	A1	20021031	US 2001-881213	20010615
	AU 2001074761	A5	20011224	AU 2001-74761	20010618
PRAI	SE 2000-2287	A	20000616		
	US 2000-216625P	P	20000707		
	WO 2001-SE1374	W	20010618		

L5 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2000:35037 CAPLUS
DN 132:90367
TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy
IN Wilbur, D. Scott; Sandberg, Bengt E. B.
PA Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,				

FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	US 2001023288	A1	20010920	US 2000-750280	20001229
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2000:35036 CAPLUS
DN 132:90366
TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy
IN Wilbur, D. Scott; Sandberg, Bengt E. B.
PA Department of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
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	AU 9883663	A1	20000124	AU 1998-83663	19980707
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1999:668186 CAPLUS
DN 132:46430
TI Molecular Necklaces. Cross-Linking Hemoglobin with Reagents Containing Covalently Attached Ligands
AU Crapatureanu, Sanda; Serbanescu, Ruxandra; Brevitt, Sharon Bisley; Kluger, Ronald
CS Lash Miller Laboratories Department of Chemistry, University of Toronto, Toronto, ON, M5S 3H6, Can.
SO Bioconjugate Chemistry (1999), 10(6), 1058-1067
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
OS CASREACT 132:46430
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1999:140535 CAPLUS
DN 130:267698
TI Synthesis of achiral linker reagents for direct labeling of oligonucleotides on solid supports
AU Behrens, Carsten; Dahl, Otto
CS Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100, Den.
SO Nucleosides & Nucleotides (1999), 18(2), 291-305
CODEN: NUNUD5; ISSN: 0732-8311
PB Marcel Dekker, Inc.
DT Journal
LA English
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1999:109400 CAPLUS
DN 130:177546
TI Methods of receptor modulation and therapeutic and diagnostic uses therefor
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott
PA Receptagen Corporation, USA; University of Washington
SO U.S., 47 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5869465	A	19990209	US 1995-406194	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123

PRAI US 1994-224831 B2 19940408
US 1995-406191 A 19950316
US 1995-406192 A 19950316
US 1995-406194 A 19950316
WO 1995-US4404 W 19950407
US 1995-545151 A3 19951019
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1998:776603 CAPLUS
DN 130:38642
TI Preparation of water soluble vitamin B12 as antiinflammatory receptor modulating agents
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott
PA Receptagen Corporation, USA; University of Washington
SO U.S., 50 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840880	A	19981124	US 1995-406191	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1998:776598 CAPLUS
DN 130:38641
TI Preparation of water soluble vitamin B12 as antiinflammatory receptor modulating agents
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
PA Receptagen Corporation, USA; University of Washington
SO U.S., 66 pp., Cont.-in-part of U.S. Ser. No. 406,191.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840712	A	19981124	US 1995-545151	19951019
	US 5739287	A	19980414	US 1995-406192	19950316
	US 5840880	A	19981124	US 1995-406191	19950316

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     US 5869465        A    19990209       US 1995-406194   19950316
     WO 9714711        A1   19970424       WO 1996-US16672  19961018
         W:  AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
             DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
             RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
             IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG
     AU 9677182        A1   19970507       AU 1996-77182    19961018
     EP 1015475        A1   20000705       EP 1996-940247   19961018
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
     US 6083926        A    20000704       US 1998-200422   19981123
PRAI US 1994-224831    B2   19940408
     US 1995-406191    A2   19950316
     US 1995-406192    A2   19950316
     US 1995-406194    A2   19950316
     WO 1995-US4404    A2   19950407
     US 1995-545151    A    19951019
     US 1995-545496    A    19951019
     WO 1996-US16672   W    19961018
OS   MARPAT 130:38641
RE.CNT  34    THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5   ANSWER 11 OF 15  CAPLUS  COPYRIGHT 2003 ACS
AN   1998:236288  CAPLUS
DN   128:295003
TI   Preparation of biotinylated cobalamins as antiinflammatory agents and
     transcobalamin II receptors
IN   Wilbur, D. Scott; Pathare, Pradip M.; Morgan, A. Charles, Jr.
PA   University of Washington, USA; Receptagen Corp.
SO   U.S., 58 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
     CODEN: USXXAM
DT   Patent
LA   English
FAN.CNT 6
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
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PI   US 5739287         A    19980414       US 1995-406192   19950316
     CA 2187346         AA   19951019       CA 1995-2187346  19950407
     WO 9527723         A1   19951019       WO 1995-US4404   19950407
         W:  AU, CA, JP, KR, NO, NZ
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
     AU 9522835         A1   19951030       AU 1995-22835    19950407
     EP 754189          A1   19970122       EP 1995-916284   19950407
     EP 754189          B1   20021009
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
     JP 10502334        T2   19980303       JP 1995-526497   19950407
     AT 225799          E    20021015       AT 1995-916284   19950407
     US 5840712         A    19981124       US 1995-545151   19951019
     US 6083926         A    20000704       US 1998-200422   19981123
PRAI US 1994-224831    B2   19940408
     US 1995-406191    A    19950316
     US 1995-406192    A    19950316
     US 1995-406194    A    19950316
     WO 1995-US4404    W    19950407
     US 1995-545151    A3   19951019

L5   ANSWER 12 OF 15  CAPLUS  COPYRIGHT 2003 ACS
AN   1997:377886  CAPLUS
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DN 126:343813
TI Preparation of vitamin B12 receptor modulating agents
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
PA Receptagen Corporation, USA; University of Washington; Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip, M.
SO PCT Int. Appl., 97 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG				
	US 5840712	A	19981124	US 1995-545151	19951019
	AU 9677182	A1	19970507	AU 1996-77182	19961018
	EP 1015475	A1	20000705	EP 1996-940247	19961018
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1995-545151	A	19951019		
	US 1995-545496	A	19951019		
	US 1994-224831	B2	19940408		
	US 1995-406191	A2	19950316		
	US 1995-406192	A2	19950316		
	US 1995-406194	A2	19950316		
	WO 1996-US16672	W	19961018		

OS MARPAT 126:343813

L5 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1997:251007 CAPLUS
DN 126:238622
TI A new achiral linker reagent for the incorporation of multiple amino groups into oligonucleotides
IN Behrens, Carsten; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John; Dahl, Otto
PA Behrens, Carsten, Den.; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John; Dahl, Otto
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9705156	A1	19970213	WO 1996-DK330	19960726
	W: AL, AM, AT, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT				
	AU 9665140	A1	19970226	AU 1996-65140	19960726
PRAI	DK 1995-863		19950727		
	WO 1996-DK330		19960726		

OS MARPAT 126:238622

L5 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1997:155067 CAPLUS
DN 126:207193
TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon; Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(2), 161-172
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

L5 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1991:225167 CAPLUS
DN 114:225167
TI Method of assaying substances and immunoassay element employing .beta.-D-galactosidase
IN Onishi, Akira; Kawakatsu, Satoshi; Ito, Tsukasa; Takahashi, Takenori; Fukaya, Michie
PA Konica Co., Japan
SO Eur. Pat. Appl., 61 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 328106	A2	19890816	EP 1989-102245	19890209
	EP 328106	A3	19901219		
	R: DE, GB				
	JP 01308966	A2	19891213	JP 1989-31530	19890209
	JP 01308967	A2	19891213	JP 1989-31531	19890209
PRAI	JP 1988-29632		19880209		
	JP 1988-29633		19880209		

OS MARPAT 114:225167

=> d l5 3-15 all

L5 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2001:923565 CAPLUS
DN 136:42919
TI **Biotin** derivatives for an extracorporeal device
IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
PA Mitra Medical Technology AB, Swed.; University of Washington
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 26
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		
	W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES,				

FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US	2002159994	A1	20021031	US 2001-881213	20010615
AU	2001074761	A5	20011224	AU 2001-74761	20010618
PRAI SE	2000-2287	A	20000616		
US	2000-216625P	P	20000707		
WO	2001-SE1374	W	20010618		

AB A method for the conditioning of an extracorporeal device is described, as well as a method for extracorporeal extn. of toxic material from mammalian body fluids in connection with diagnosis or treatment of a mammalian condition or disease. The methods comprise (i) a soln. contg. a reagent comprising **biotin** moieties, such as natural **biotin** or its derivs., and a toxin-binding moiety, (ii) linkers and a trifunctional crosslinking moiety, and (ii) an extracorporeal device comprising said reagent. For example, a dibiotin compd., 1-isothiocyanato-3,5-bis-(13'-biotinamidyl-4',7',10'-trioxatridecanamidyl)-aminoisophthalate was prepd. and conjugated with a toxin-binding mol., i.e., monoclonal antibody 53-6A2. A dibiotin-toxin-binding conjugate was used for conditioning of an avidin-agarose column suitable for removal of toxins from blood.

ST **biotin** deriv prepn reagent extracorporeal toxin extn; body fluid toxin extn extracorporeal **biotin** reagent

IT Histocompatibility antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HLA, antibodies against; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Imaging
(NMR; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and therapy)

IT Intercalation
(agents; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies
RL: REM (Removal or disposal); PROC (Process)
(anti-blood group; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Blood-group substances
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antibodies against; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Avidins
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**biotin** derivs.-binding coatings; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Immunity
(cells involved in, removal of; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Avidins
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological

study); USES (Uses)
(conjugates, with agarose; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Animal cell
(diseased, removal of; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Toxins
RL: REM (Removal or disposal); PROC (Process)
(endotoxins; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Toxins
RL: REM (Removal or disposal); PROC (Process)
(enterotoxins; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Circulation
Extraction
(extracorporeal; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Chelating agents
(for radionuclides; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Immunoglobulins
RL: REM (Removal or disposal); PROC (Process)
(fragments; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monoclonal, conjugates, with dibiotin compd.; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies
RL: REM (Removal or disposal); PROC (Process)
(monoclonal; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Amino group
Blood
Body fluid
Carboxyl group
Chemotherapy
Cytotoxic agents
Dyes
Extraction columns
Hydroxyl group
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Chelates
Cytokines
Metals, processes
Oligodeoxyribonucleotides
Peptides, processes
Radionuclides, processes
Toxins
Tumor necrosis factors

RL: REM (Removal or disposal); PROC (Process)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Diagnosis
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and disease treatment)

IT Positron-emission tomography
Scintigraphy
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and therapy)

IT Transplant and Transplantation
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids prior to transplantation)

IT Bacteria (Eubacteria)
Virus
(toxins; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Disease, animal
(treatment; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and disease treatment)

IT Reagents
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tribiotinylated; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Neoplasm
(uptake, monitoring of; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(xenoantibodies, antibodies against; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 9013-20-1, Streptavidin
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**biotin** derivs.-binding coatings; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 9012-36-6D, Agarose, conjugates with avidin
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 58-85-5, **Biotin 99-31-0**, 5-Aminoisophthalic acid
4246-51-9, 4,7,10,Trioxa-1,13-tridecanediamine 24424-99-5, Di-tert-butyl dicarbonate 142685-25-4, 2,3,5,6-Tetrafluorophenyl trifluoroacetate 380607-49-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 173341-32-7P 178446-63-4P 183896-00-6P 380607-50-1P 380607-51-2P 380607-56-7P 380607-60-3P 380607-61-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of **biotin** derivs. for conditioning of extracorporeal

device and extn. of toxic material from mammalian body fluids)

IT 380607-52-3P 380607-54-5P
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 194920-56-4P 194920-58-6P 380607-48-7P 380607-52-3DP, conjugates with monoclonal antibodies 380607-53-4P 380607-55-6P 380607-57-8P 380607-58-9P 380607-59-0P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 533-48-2, Desthiobiotin 535-87-5, 3,5-Diaminobenzoic acid 554-95-0, 1,3,5-Benzene tricarboxylic acid 669-72-7, Nor-**biotin** 1784-22-1, Homobiotin 3376-83-8, **Biotin** sulfoxide 13395-35-2, Iminobiotin 14474-91-0, Oxybiotin 22342-46-7, Diaminobiotin 40720-05-6, **Biotin** sulfone
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 58-85-5D, **Biotin**, derivs.
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(radiolabeled; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

L5 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2000:35037 CAPLUS
DN 132:90367
TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy
IN Wilbur, D. Scott; Sandberg, Bengt E. B.
PA Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N033-543
ICS A61K039-00; A61K047-48; A61K051-00; A61K049-00
CC 9-15 (Biochemical Methods)
Section cross-reference(s): 1, 8, 15, 63
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000002051	A1	20000113	WO 1999-SE1241	19990707

W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

WO 2000002050	A1	20000113	WO 1998-SE1345	19980707

W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG,

SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

CA	2336739	AA	20000113	CA 1999-2336739	19990707
AU	9950767	A1	20000124	AU 1999-50767	19990707
EP	1095274	A1	20010502	EP 1999-935251	19990707
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP	2002519440	T2	20020702	JP 2000-558395	19990707
US	2001023288	A1	20010920	US 2000-750280	20001229
NO	2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

AB A reagent for conjugation to a biomol. for diagnosis and treatment of human and animal conditions and diseases is described, wherein the reagent is a single mol. with at least three functional parts and a) wherein a trifunctional crosslinking moiety is coupled to b) an affinity ligand via a linker 1, said affinity ligand being capable of binding with another mol. having affinity for said ligand; to c) an effector agent, optionally via a linker 2, said effector agent exerting its effects on cells, tissues and/or humorous mols. in vivo or ex vivo; and to d) a biomol. reactive moiety, optionally via a linker 3, said moiety being capable of forming a bond between the reagent and the biomol. The affinity ligand is esp. **biotin** or a **biotin** deriv. The effector agent is a toxin, an enzyme capable of converting a prodrug to an active drug, an immunosuppressant, an immunostimulant, or a radionuclide-binding agent, with or without the radionuclide.

ST trifunctional reagent biomol conjugation diagnosis therapy; **biotin** trifunctional reagent biomol conjugate diagnosis therapy; toxin trifunctional reagent biomol conjugate therapy; prodrug converting enzyme trifunctional reagent conjugate; immunomodulator trifunctional reagent conjugate; radiotherapy trifunctional reagent conjugate; imaging agent trifunctional reagent conjugate

IT Imaging agents
(NMR contrast, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Imaging agents
(acoustic imaging contrast agents, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(affinity ligand-binding, for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Ligands
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(affinity, trifunctional reagent contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Functional groups
(ammonio group, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Chromophores
Fluorescent substances
(as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Separators
(blood plasma, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Amines, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(cyclic, radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Lung, disease
(embolism; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Carboxylic acids, properties
RL: PRP (Properties)
(esters, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Adsorption apparatus
(extracorporeal, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Circulation
(extracorporeal, nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Affinity chromatographic stationary phases
(for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Imaging
(gamma-ray; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Vinyl compounds, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(halo, halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Aryl halides
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Avidins
Receptors
RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immobilized, extracorporeal adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Heart, disease
(infarction; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Ethers, properties

Sulfonates
Thioethers
RL: PRP (Properties)
(linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation
(nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radiosensitizers, biological
(pharmaceutical, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Materials
(photoactive chems., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(prodrug-metabolizing, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Drug delivery systems
(prodrugs, trifunctional reagent contg. enzymes metabolizing; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Brain, disease
(stroke; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radiotherapy
(targeted; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Disease, animal
(treatment of; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Avidins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Body fluid
(trifunctional reagent contg. effector agent acting on mols. in; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal tissue
Cell
(trifunctional reagent contg. effector agent acting on; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radionuclides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent contg. moieties binding to, as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Immunostimulants
Immunosuppressants
(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies
Hormones, animal, biological studies
Toxins
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal
Atherosclerosis
Biochemical molecules
Diagnosis
Drug targeting
Mammal (Mammalia)
Neoplasm
Photodynamic therapy
Photoimaging
Positron-emission tomography
Therapy
Vertebrate (Vertebrata)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Reagents
RL: ARG (Analytical reagent use); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Crosslinking agents
(trifunctional; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Thrombosis
(venous, deep; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Imaging agents
(x-ray, contrast, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9025-15-4, Biotinidase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**biotin**-contg. reagent with stability against cleavage with; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 7439-92-1D, Lead, radionuclides, biological studies 7439-94-3D, Lutetium, radionuclides, biological studies 7440-19-9D, Samarium, radionuclides, biological studies 7440-50-8D, Copper, radionuclides, biological studies 7440-65-5D, Yttrium, radionuclides, biological studies 7440-69-9D, Bismuth, radionuclides, biological studies 7440-74-6D, Indium, radionuclides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(cyclic amines binding to, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 15715-08-9, Iodine-123, biological studies 15750-15-9, Indium-111, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);

ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-56-1, Fluorine-18, biological studies 14158-30-6, Iodine-124, biological studies 14809-47-3, Bromine-75, biological studies 15765-38-5, Bromine-76, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for positron imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 10043-66-0, Iodine-131, biological studies 10098-91-6, Yttrium-90, biological studies 14265-75-9, Lutetium-177, biological studies 14378-26-8, Rhenium-188, biological studies 14913-49-6, Bismuth-212, biological studies 14998-63-1, Rhenium-186, biological studies 15623-45-7, Radium-223, biological studies 15755-39-2, Astatine-211, biological studies 15757-86-5, Copper-67, biological studies 15776-20-2, Bismuth-213, biological studies 29687-57-8, Samarium-157, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1D, Streptavidin, immobilized
RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(extracorporeal adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 14133-76-7, Technetium-99, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(metastable, effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-55-0, Indium-114, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(metastable, effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 60-00-4D, EDTA, derivs. 67-43-6D, DTPA, derivs. 3565-84-2 56491-86-2, NOTA 60239-18-1, DOTA 60239-22-7, TETA 254441-22-0
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1, Streptavidin

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 58-85-5D, **Biotin**, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety **99-31-0D**, 3,5-Dicarboxyaniline, conjugates with affinity ligand and effector agent and biomol. reactive moiety 108-72-5D, 1,3,5-Triaminobenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety 533-48-2D, Desthiobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 535-87-5D, 3,5-Diaminobenzoic acid, conjugates with affinity ligand and effector agent and biomol. reactive moiety 554-95-0D, 1,3,5-Tricarboxybenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety 669-72-7D, Norbiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 1784-22-1D, Homobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 3376-83-8D, **Biotin** sulfoxide, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 13395-35-2D, Iminobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 14474-91-0D, Oxybiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 22342-46-7D, Diaminobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 40720-05-6D, **Biotin** sulfone, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 254441-23-1 254441-24-2D, derivs. 254441-25-3 254441-26-4 254441-28-6 254447-29-5 254447-31-9
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Beckman Instruments Inc; EP 0310361 A2 1989 CAPLUS
(2) Board Of Regents Of The University Of Washington; WO 9729114 A1 1997 CAPLUS
(3) Boehringer Mannheim Gmbh; EP 0618192 A1 1994 CAPLUS
(4) Cancer Research Campaign Technology Limited; WO 8910140 A1 1989 CAPLUS
(5) Eigo, O; 1997, 20, CAPLUS
(6) Eigo, O; Cancer Res 1997, V88(2), P205
(7) Gaetjens, E; US 5134071 A 1992 CAPLUS
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(10) Jacobson, K; US 5310916 A 1994 CAPLUS
(11) Muzykantov, V; Proc Natl Acad Sci 1996, V93, P5213 CAPLUS
(12) Pharmacia & Upjohn Ab; WO 9904820 A2 1999 CAPLUS
(13) Tutt, A; The Journal of Immunology 1991, V147(1), P60 CAPLUS

L5 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2000:35036 CAPLUS
DN 132:90366
TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy

IN Wilbur, D. Scott; Sandberg, Bengt E. B.
PA Department of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB

SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English

IC ICM G01N033-543
ICS C07K019-00; A61K039-395; A61K047-48; A61K051-00; A61K049-00
CC 9-15 (Biochemical Methods)
Section cross-reference(s): 1, 8, 15, 63
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9883663	A1	20000124	AU 1998-83663	19980707
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

AB A reagent for conjugation to a biomol. for diagnosis and treatment of human and animal conditions and diseases is described, wherein the reagent is a single mol. with at least three functional parts and a) wherein a trifunctional crosslinking moiety is coupled to b) an affinity ligand via a linker 1, said affinity ligand being capable of binding with another mol. having affinity for said ligand; to c) an effector agent, optionally via a linker 2, said effector agent exerting its effects on cells, tissues and/or humorous mols. in vivo or ex vivo; and to d) a biomol. reactive moiety, optionally via a linker 3, said moiety being capable of forming a bond between the reagent and the biomol. The affinity ligand is esp. **biotin** or a **biotin** deriv. The effector agent is a toxin, an enzyme capable of converting a prodrug to an active drug, an immunosuppressant, an immunostimulant, or a radionuclide-binding agent, with or without the radionuclide.

ST trifunctional reagent biomol conjugation diagnosis therapy; **biotin** trifunctional reagent biomol conjugate diagnosis therapy; toxin trifunctional reagent biomol conjugate therapy; prodrug converting enzyme trifunctional reagent conjugate; immunomodulator trifunctional reagent conjugate; radiotherapy trifunctional reagent conjugate; imaging agent trifunctional reagent conjugate

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(affinity ligand-binding, for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a

biomol. for use in diagnosis and therapy)

IT Ligands
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(affinity, trifunctional reagent contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Functional groups
(ammonio group, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Separators
(blood plasma, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Amines, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(cyclic, radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Lung, disease
(embolism; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Carboxylic acids, properties
RL: PRP (Properties)
(esters, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Adsorption apparatus
(extracorporeal, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation
(extracorporeal, nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Affinity chromatographic stationary phases
(for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Imaging
(gamma-ray; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Vinyl compounds, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(halo, halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Aryl halides
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Avidins
Receptors

RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immobilized, extracorporeal adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Heart, disease
(infarction; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Ethers, properties
Sulfonates
Thioethers
RL: PRP (Properties)
(linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation
(nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(prodrug-metabolizing, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Drug delivery systems
(prodrugs, trifunctional reagent contg. enzymes metabolizing; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Brain, disease
(stroke; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radiotherapy
(targeted; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Disease, animal
(treatment of; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Avidins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Body fluid
(trifunctional reagent contg. effector agent acting on mols. in; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal tissue
Cell
(trifunctional reagent contg. effector agent acting on; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radionuclides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent contg. moieties binding to, as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Immunostimulants
Immunosuppressants

(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies
Toxins
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal
Atherosclerosis
Biochemical molecules
Diagnosis
Drug targeting
Mammal (Mammalia)
Neoplasm
Positron-emission tomography
Therapy
Vertebrate (Vertebrata)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Reagents
RL: ARG (Analytical reagent use); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Crosslinking agents
(trifunctional; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Thrombosis
(venous, deep; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9025-15-4, Biotinidase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**biotin**-contg. reagent with stability against cleavage with; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 7439-92-1D, Lead, radionuclides, biological studies 7439-94-3D, Lutetium, radionuclides, biological studies 7440-19-9D, Samarium, radionuclides, biological studies 7440-50-8D, Copper, radionuclides, biological studies 7440-65-5D, Yttrium, radionuclides, biological studies 7440-69-9D, Bismuth, radionuclides, biological studies 7440-74-6D, Indium, radionuclides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(cyclic amines binding to, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 15715-08-9, Iodine-123, biological studies 15750-15-9, Indium-111, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-56-1, Fluorine-18, biological studies 14158-30-6, Iodine-124, biological studies 14809-47-3, Bromine-75, biological studies 15765-38-5, Bromine-76, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for positron imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 10043-66-0, Iodine-131, biological studies 10098-91-6, Yttrium-90, biological studies 14265-75-9, Lutetium-177, biological studies 14378-26-8, Rhenium-188, biological studies 14913-49-6, Bismuth-212, biological studies 14998-63-1, Rhenium-186, biological studies 15623-45-7, Radium-223, biological studies 15755-39-2, Astatine-211, biological studies 15757-86-5, Copper-67, biological studies 15776-20-2, Bismuth-213, biological studies 29687-57-8, Samarium-157, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1D, Streptavidin, immobilized
RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(extracorporeal adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 14133-76-7, Technetium-99, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(metastable, effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-55-0, Indium-114, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(metastable, effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 60-00-4D, EDTA, derivs. 67-43-6D, DTPA, derivs. 3565-84-2 56491-86-2, NOTA 60239-18-1, DOTA 60239-22-7, TETA 254441-22-0
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1, Streptavidin
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 58-85-5D, **Biotin**, conjugates with crosslinking agent binding to

effect agent and to biomol. reactive moiety **99-31-0D**, 3,5-Dicarboxyaniline, conjugates with affinity ligand and effector agent and biomol. reactive moiety 108-72-5D, 1,3,5-Triaminobenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety 533-48-2D, Desthiobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 535-87-5D, 3,5-Diaminobenzoic acid, conjugates with affinity ligand and effector agent and biomol. reactive moiety 554-95-0D, 1,3,5-Tricarboxybenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety 669-72-7D, Norbiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 1784-22-1D, Homobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 3376-83-8D, **Biotin** sulfoxide, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 13395-35-2D, Iminobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 14474-91-0D, Oxybiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 22342-46-7D, Diaminobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 40720-05-6D, **Biotin** sulfone, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 254441-23-1 254441-24-2D, derivs. 254441-25-3 254441-26-4 254441-28-6 254447-29-5
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Beckman Instruments Inc; EP 0310361 A2 1989 CAPLUS
(2) Board Of Regents Of The University Of Washington; WO 9729114 A1 1997 CAPLUS
(3) Boehringer Mannheim Gmbh; EP 0618192 A1 1994 CAPLUS
(4) Cancer Research Campaign Technology Limited; WO 8910140 A1 1989 CAPLUS
(5) Gaetjens, E; US 5134071 A 1992 CAPLUS
(6) Hybritech Incorporated; WO 9302105 A1 1993 CAPLUS
(7) Immunomedics Inc; WO 9604313 A1 1996 CAPLUS
(8) Jacobson, K; US 5310916 A 1994 CAPLUS
(9) Muzykantov, V; Proc Natl Acad Sci 1996, V93, P5213 CAPLUS
(10) Otusji, E; 1997, 20, CAPLUS
(11) Otusji, E; Cancer Res 1997, V88(2), P205 CAPLUS

L5 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1999:668186 CAPLUS
DN 132:46430
TI Molecular Necklaces. Cross-Linking Hemoglobin with Reagents Containing Covalently Attached Ligands
AU Crapatureanu, Sanda; Serbanescu, Ruxandra; Brevitt, Sharon Bisley; Kluger, Ronald
CS Lash Miller Laboratories Department of Chemistry, University of Toronto, Toronto, ON, M5S 3H6, Can.
SO Bioconjugate Chemistry (1999), 10(6), 1058-1067
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
CC 6-3 (General Biochemistry)
Section cross-reference(s): 9
OS CASREACT 132:46430
AB Hb can be cross-linked and converted to a bioconjugate in one step by a mol. necklace, a reagent that contains two reacting sites and a pendant

ligand. The compd. to be conjugated is activated as an electrophile. The activated material is then combined with a reagent (3-aminoisophthalic acid) that contains a nucleophilic (amino) site and two latent (carboxyl) sites. The latent sites of the product are activated as 3,5-dibromosalicylates to produce the cross-linker. Illustrative examples of crosslinking are presented with pendant **biotin** [bis(3,5-dibromosalicyl) N-biotinyl-5-aminoisophthalate] and pendant N-trifluoroacetyl-L-isoleucylglycine [bis(3,5-dibromosalicyl) N-(N-trifluoroacetyl-L-isoleucylglycyl)-5-aminoisophthalate]. The resulting modified Hbs contain two principal types of cross-link: (.beta.-Lys-82-.beta.'-Lys-82) and (.alpha.-Lys-99-.alpha.'-Lys-99). The functional properties of the modified Hb contg. **biotin** in a (.beta.-Lys-82-.beta.'-Lys-82) cross-link are (pH 7.4, 55 .mu.M heme, 25 .degree.C, 0.1 M chloride, and 50 mM Bis-Tris) P50 = 4.9 Torr, n50 = 3.0, values which are approx. the same as for native Hb. The results of affinity chromatog. of the biotinylated cross-linked Hb using a column of immobilized avidin indicate that the pendant **biotin** is much less accessible than free **biotin**. We suggest that the results are consistent with the pendant species being strongly attracted into the Hb environment.

ST Hb crosslinking bioconjugate mol necklace pendant ligand

IT Hemoglobins
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(crosslinked, bioconjugates; prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)

IT Crosslinking
(prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)

IT Hemoglobins
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)

IT 7782-44-7, Oxygen, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(binding by Hb bioconjugates; prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)

IT 56-87-1, L-Lysine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking; prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)

IT 25952-53-8, 1-(3-Dimethylaminopropyl)3-ethylcarbodiimide hydrochloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(linker; prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)

IT 58-85-5 **99-27-4**, Dimethyl 5-aminoisophthalate **99-31-0**, 5-Aminoisophthalic acid 407-25-0, Trifluoroacetic acid anhydride 7719-09-7, Thionyl chloride 16257-05-9 88797-22-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)

IT 91853-90-6P 252861-79-3P 252861-80-6P 252861-81-7P 252861-82-8P 252861-83-9P 252861-84-0P 252861-85-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L5 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1999:140535 CAPLUS
DN 130:267698
TI Synthesis of achiral linker reagents for direct labeling of oligonucleotides on solid supports
AU Behrens, Carsten; Dahl, Otto
CS Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100, Den.
SO Nucleosides & Nucleotides (1999), 18(2), 291-305
CODEN: NUNUD5; ISSN: 0732-8311
PB Marcel Dekker, Inc.
DT Journal
LA English
CC 33-10 (Carbohydrates)
Section cross-reference(s): 9
AB Full exptl. procedures for the synthesis of a series of new functional linker reagents and solid supports are reported. The achiral linker reagents and supports can be used for high yield incorporation of free amino groups, fluorescein or **biotin** into DNA oligomers.
ST achiral amino linker oligonucleotide solidphase prepn fluorescent label; hybridization oligonucleotide achiral amino linker
IT Solid phase synthesis
(of oligonucleotides contg. achiral amino linker reagents for direct labeling)
IT Nucleic acid hybridization
(of oligonucleotides contg. achiral amino linker units)
IT Fluorescent substances
(prepn. of using achiral amino linker reagents for direct labeling of oligonucleotides)
IT Oligonucleotides
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)
(synthesis of achiral amino linker reagents for direct labeling of oligonucleotides on solid supports)

IT **99-31-0P 42122-73-6P** 71176-54-0P 146335-23-1P
147190-36-1P 171082-06-7P 171082-07-8P 171082-08-9DP, solid-supported 171082-09-0P 188257-47-8P 188257-52-5P
188257-53-6DP, solid-supported 188257-54-7P 188257-55-8P
188257-56-9DP, solid-supported 221318-06-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of in the synthesis of achiral amino linker reagents for direct labeling of oligonucleotides on solid supports)

IT 171717-18-3P 171717-19-4P 171717-20-7P 171717-21-8P 171717-22-9P
171844-08-9P 188366-81-6P 188366-82-7P 188366-83-8P 188366-85-0P
188366-86-1P 188420-41-9P 188420-42-0P 188420-43-1P 188420-44-2P
222054-01-5P 222054-02-6P 222054-03-7P 222054-04-8P 222054-05-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents for direct labeling of oligonucleotides on solid supports)

IT 221889-90-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents in one chain and effect on hybridization)

IT 221889-92-5P 221889-94-7P 221889-96-9P 221889-98-1P 221890-00-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents in one chain and effect on hybridization)

IT 618-88-2 3282-30-2, Pivaloyl chloride 3326-32-7 28920-43-6, 9-Fluorenylmethyl chloroformate 35013-72-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of in the synthesis of achiral amino linker reagents for direct labeling of oligonucleotides on solid supports)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L5 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1999:109400 CAPLUS
DN 130:177546
TI Methods of receptor modulation and therapeutic and diagnostic uses therefor

IN Morgan, A. Charles, Jr.; Wilbur, D. Scott
PA Receptagen Corporation, USA; University of Washington

SO U.S., 47 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM A61K031-68
ICS C12P019-42
NCL 514052000
CC 1-12 (Pharmacology)
Section cross-reference(s): 9, 26

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5869465	A	19990209	US 1995-406194	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		

AB Receptor-modulating agents capable of modulating cell surface receptors by affecting the cell-surface receptor trafficking pathway are utilized for the treatment and diagnosis of a variety of disorders in warm-blooded animals, including neoplastic disorders. The receptor-modulating agents are comprised of a covalently bound rerouting moiety and targeting moiety. Synthesis of several receptor-modulating agents using different functional classes of rerouting moieties is described. More specifically, a series of examples are presented which employ vitamin B12 as a targeting moiety in a receptor-modulating agent.

ST receptor modulating agent diagnostic therapeutic; neoplasm diagnosis therapy receptor modulating agent; vitamin B12 receptor modulating agent prepn

IT Protein receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(transcobalamin II; receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT Receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(vitamin B12 and others; receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 55729-45-8P 72040-64-3P 173341-32-7P 173341-33-8P 173341-34-9P 173341-49-6P 173341-59-8P 189887-10-3P 189887-11-4P 189887-12-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction; receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 58-85-5, **Biotin** 60-32-2, 6-Aminocaproic acid **99-31-0**, 5-Aminoisophthalic acid 99-63-8, Isophthaloyl dichloride 108-30-5, Succinic anhydride, reactions 260-94-6D, Acridine, derivs, conjugates with cyanocobalamin carboxylic acid diaminododecanesuccinyl deriv. 769-39-1, 2,3,5,6-Tetrafluorophenol 813-19-4, Bis(tributyltin) 1711-02-0, 4-Iodobenzoyl chloride 2783-17-7, 1,12-Diaminododecane 15231-41-1 27497-52-5, Tetrafluorophenol 35013-72-0 110079-43-1 173341-35-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 68-19-9D, Vitamin B12, dimers

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 68-19-9, Cyanocobalamin
RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
(receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 26264-28-8P 38218-55-2P 38218-77-8P 160927-56-0P 173341-26-9P 173341-31-6P
RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 72333-39-2P 173341-27-0P 173341-36-1P 173341-37-2P 173341-38-3P 173341-39-4P 173341-40-7DP, conjugate with acridine deriv. 173341-41-8P 173341-42-9P 173341-46-3P 173341-47-4P 173341-48-5P
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 173341-51-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 173341-52-1P 173341-53-2P 173341-54-3P 189887-10-3DP, conjugate with acridine deriv. 189887-11-4DP, conjugate with acridine deriv. 189887-12-5DP, conjugate with acridine deriv.
RL: SPN (Synthetic preparation); PREP (Preparation)
(receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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(4) Anon; WO 93/23557 1993 CAPLUS
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(6) Anon; WO 94/27613 1994 CAPLUS
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L5 ANSWER 9 OF 15 CAPLUS
AN 1998:776603 CAPLUS

DN 130:38642
TI Preparation of water soluble vitamin B12 as antiinflammatory receptor modulating agents
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott
PA Receptagen Corporation, USA; University of Washington
SO U.S., 50 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM C12P019-42
ICS A61K031-68
NCL 536026400
CC 33-7 (Carbohydrates)
Section cross-reference(s): 1, 34, 63
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840880	A	19981124	US 1995-406191	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		

AB Vitamin B12 antiinflammatory receptor modulating agents capable of modulating cell surface receptors by affecting the cell surface receptor trafficking pathway are disclosed. The vitamin B12 receptor modulating agents are comprised of a covalently bound rerouting moiety and targeting moiety linked by a water-solubilizing linker. Synthesis of a vitamin B12/**biotin** conjugate and fusion protein receptor modulating agent is reported.

ST water soluble linker vitamin B12 prepn; receptor modulating agent vitamin B12; vitamin B12 **biotin** peptide prepn antiinflammatory

IT Anti-inflammatory agents
(Prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

IT Peptides, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

IT Receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(Prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

IT 12651-28-4, Transcobalamin II
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(Prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

IT 56-12-2, GABA, reactions 57-92-1, reactions 58-85-5 60-32-2 68-19-9, Cyanocobalamin **99-31-0** 99-63-8, 1,3-Benzenedicarbonyl dichloride 769-39-1, 2,3,5,6-Tetrafluorophenol 1711-02-0 2783-17-7, 1,12-Dodecanediamine 35013-72-0 80366-85-4 86689-14-7 110079-43-1 173341-32-7 216692-05-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(Prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

IT 26264-28-8P 38218-55-2P 38218-77-8P 55729-45-8P 72040-64-3P 160927-56-0P 173341-26-9P 173341-27-0P 173341-31-6P 173341-33-8P 173341-34-9P 173341-35-0P 173341-36-1P 173341-37-2P 173341-38-3P 173341-39-4P 173341-40-7P 173341-41-8P 173341-42-9P 173341-43-0P 173341-44-1P 173341-45-2P 173341-46-3P 173341-47-4P 173341-48-5P 173341-49-6P 173341-51-0P 173341-52-1P 173341-53-2P 173341-54-3P 173341-59-8P 189887-07-8P 189887-08-9P 189887-10-3P 189887-11-4P 189887-12-5P 216757-91-4P 216757-92-5P 216757-93-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(Prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L5 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1998:776598 CAPLUS
DN 130:38641
TI Preparation of water soluble vitamin B12 as antiinflammatory receptor modulating agents

IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
PA Receptagen Corporation, USA; University of Washington
SO U.S., 66 pp., Cont.-in-part of U.S. Ser. No. 406,191.
CODEN: USXXAM
DT Patent
LA English
IC ICM A01N043-04
ICS A61K031-70
NCL 514052000
CC 33-7 (Carbohydrates)
Section cross-reference(s): 1, 34, 63
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840712	A	19981124	US 1995-545151	19951019
	US 5739287	A	19980414	US 1995-406192	19950316
	US 5840880	A	19981124	US 1995-406191	19950316
	US 5869465	A	19990209	US 1995-406194	19950316
	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG				
	AU 9677182	A1	19970507	AU 1996-77182	19961018
	EP 1015475	A1	20000705	EP 1996-940247	19961018
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A2	19950316		
	US 1995-406192	A2	19950316		
	US 1995-406194	A2	19950316		
	WO 1995-US4404	A2	19950407		
	US 1995-545151	A	19951019		
	US 1995-545496	A	19951019		
	WO 1996-US16672	W	19961018		

OS MARPAT 130:38641
AB Vitamin B12 antiinflammatory receptor modulating agents capable of modulating cell surface receptors by affecting the cell surface receptor trafficking pathway are disclosed. The vitamin B12 receptor modulating agents are comprised of a covalently bound rerouting moiety and targeting moiety linked by a water-solubilizing linker. Synthesis of a vitamin B12/**biotin** conjugate and fusion protein receptor modulating agent is reported.
ST water soluble linker vitamin B12 prepn; receptor modulating agent vitamin B12; vitamin B12 **biotin** peptide prepn antiinflammatory
IT Anti-inflammatory agents
(prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)
IT Peptides, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)
IT Receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prepn. of water sol. vitamin B12 as antiinflammatory receptor

modulating agents)

IT 188014-58-6P 188014-60-0P 189887-13-6P 189887-14-7P 189887-15-8P 189887-16-9P 189887-17-0P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

IT 12651-28-4, Transcobalamin II
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

IT 56-12-2, reactions 57-92-1, Streptomycin, reactions 58-85-5, **Biotin** 60-32-2, 6-Aminocaproic acid 68-19-9, Cyanocobalamin **99-31-0**, 5-Aminoisophthalic acid 99-63-8, 1,3-Benzenedicarbonyl dichloride 769-39-1, 2,3,5,6-Tetrafluorophenol 1711-02-0, 4-Iodobenzoyl chloride 2783-17-7, 1,12-Diaminododecane 35013-72-0 80366-85-4 86689-14-7 110079-43-1 173341-32-7 216692-05-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

IT 26264-28-8P 38218-55-2P 38218-77-8P 55729-45-8P 72040-64-3P 160927-56-0P 173341-26-9P 173341-27-0P 173341-31-6P 173341-33-8P 173341-34-9P 173341-35-0P 173341-36-1P 173341-37-2P 173341-38-3P 173341-39-4P 173341-40-7P 173341-41-8P 173341-42-9P 173341-43-0P 173341-44-1P 173341-45-2P 173341-46-3P 173341-47-4P 173341-48-5P 173341-49-6P 173341-51-0P 173341-52-1P 173341-53-2P 173341-54-3P 173341-59-8P 189887-07-8P 189887-08-9P 189887-10-3P 189887-11-4P 189887-12-5P 216757-91-4P 216757-92-5P 216757-93-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L5 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1998:236288 CAPLUS
DN 128:295003
TI Preparation of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors
IN Wilbur, D. Scott; Pathare, Pradip M.; Morgan, A. Charles, Jr.
PA University of Washington, USA; Receptagen Corp.
SO U.S., 58 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM A61K031-70
ICS A61K038-16; C07H023-00; C07K001-113
NCL 530367000
CC 33-7 (Carbohydrates)
Section cross-reference(s): 1, 63
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5739287	A	19980414	US 1995-406192	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		

AB A biotinylated cobalamin, formed from a vitamin B12 mol. coupled to a **biotin** mol., is disclosed. In a preferred embodiment, the vitamin B12 mol. is cyanocobalamin. The **biotin** mol. can also be coupled to a rerouting moiety, optionally through a **biotin** binding protein such as avidin or streptavidin. The biotinylated cobalamin binds to a cell surface receptor, is invaginated, and once internalized affects the receptor trafficking pathway.

ST biotinylated cyanocobalamin prepn antiinflammatory transcobalamin receptor
IT Anti-inflammatory agents
(prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)
IT Receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 160927-56-0P 173341-26-9P 173341-27-0P 173341-31-6P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 50479-22-6
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 173341-36-1P 173341-37-2P 173341-38-3P 173341-39-4P 173341-40-7P
173341-41-8P 173341-42-9P 173341-46-3P 173341-47-4P 173341-48-5P
189887-08-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 12651-28-4, Transcobalamin II
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 58-85-5, **Biotin** 60-32-2, 6-Aminocaproic acid 68-19-9, Cyanocobalamin **99-31-0**, 5-Aminoisophthalic acid 769-39-1, 2,3,5,6-Tetrafluorophenol 2783-17-7, 1,12-Diaminododecane
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 26264-28-8P 38218-55-2P 38218-77-8P 55729-45-8P 72040-64-3P
173341-33-8P 173341-34-9P 173341-35-0P 173341-49-6P 173341-59-8P
189887-10-3P 189887-11-4P 189887-12-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 173341-32-7P 173341-43-0P 173341-44-1P 173341-45-2P 173341-51-0P
173341-52-1P 173341-53-2P 173341-54-3P 189887-07-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

L5 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1997:377886 CAPLUS
DN 126:343813
TI Preparation of vitamin B12 receptor modulating agents
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
PA Receptagen Corporation, USA; University of Washington; Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip, M.
SO PCT Int. Appl., 97 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07H023-00
CC 33-9 (Carbohydrates)
FAN.CNT 6

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG				
	US 5840712	A	19981124	US 1995-545151	19951019
	AU 9677182	A1	19970507	AU 1996-77182	19961018
	EP 1015475	A1	20000705	EP 1996-940247	19961018
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1995-545151	A	19951019		
	US 1995-545496	A	19951019		
	US 1994-224831	B2	19940408		
	US 1995-406191	A2	19950316		
	US 1995-406192	A2	19950316		
	US 1995-406194	A2	19950316		
	WO 1996-US16672	W	19961018		

OS MARPAT 126:343813

AB Vitamin B12 receptor modulating agents capable of modulating cell surface receptors by affecting the cell surface receptor trafficking pathway are disclosed. The vitamin B12 receptor modulating agents are comprised of a covalently bound rerouting moiety and targeting moiety linked by a water-solubilizing linker.

ST receptor modulating agent vitamin B12 prepn; nucleoside vitamin B12 prepn antiinflammatory; vitamin B12 prepn receptor antiinflammatory

IT Anti-inflammatory agents
(prepn. and antiinflammatory activity of vitamin B12 receptor modulating agents)

IT Receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(vitamin B12 modulating agents; prepn. and antiinflammatory activity of vitamin B12 receptor modulating agents)

IT Nucleosides, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(vitamin B12; prepn. and antiinflammatory activity of vitamin B12 receptor modulating agents)

IT 189887-08-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. and antiinflammatory activity of vitamin B12 receptor modulating agents)

IT 173341-40-7P 173341-41-8P 173341-42-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. and antiinflammatory activity of vitamin B12 receptor modulating agents)

IT 57-92-1, Streptomycin, reactions 58-85-5, **Biotin** 60-32-2, 6-Aminocaproic acid 68-19-9, Vitamin B12 86-38-4 **99-31-0**, 5-AminoisophthALIC ACID 99-63-8, 1,3-Benzenedicarbonyl dichloride 769-39-1, 2,3,5,6-TETRAFLUOROPHENOL 1711-02-0, 4-Iodobenzoyl chloride 4246-51-9 38218-77-8 50479-22-6 173341-33-8 173341-35-0
RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. and antiinflammatory activity of vitamin B12 receptor modulating agents)

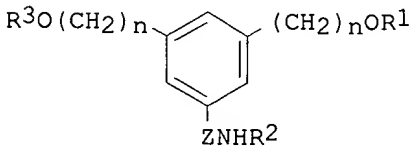
IT 68-19-9DP, Cyanocobalamin, b, d, or e-diaminododecanamide acridine or biotinylated isophthaloyl derivs. 2783-17-7P, 1,12-Diaminododecane 26264-28-8P 38218-55-2P 72040-64-3P 160927-56-0P 173341-26-9P 173341-27-0P 173341-31-6P 173341-32-7P 173341-34-9P 173341-36-1P 173341-37-2P 173341-38-3P 173341-39-4P 173341-46-3P 173341-47-4P 173341-48-5P 173341-49-6P 173341-59-8P 189887-07-8P 189887-10-3P 189887-11-4P 189887-12-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and antiinflammatory activity of vitamin B12 receptor modulating agents)

IT 173341-51-0P 173341-52-1P 173341-53-2P 173341-54-3P 188014-58-6P 188014-60-0P 189887-13-6P 189887-14-7P 189887-15-8P 189887-16-9P 189887-17-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and antiinflammatory activity of vitamin B12 receptor modulating agents)

L5 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1997:251007 CAPLUS
DN 126:238622
TI A new achiral linker reagent for the incorporation of multiple amino groups into oligonucleotides
IN Behrens, Carsten; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John; Dahl, Otto
PA Behrens, Carsten, Den.; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John; Dahl, Otto
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07H021-00
ICS C07F009-24; C07F009-141; C12Q001-68; G01N033-543
CC 33-10 (Carbohydrates)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9705156	A1	19970213	WO 1996-DK330	19960726
	W: AL, AM, AT, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT				
	AU 9665140	A1	19970226	AU 1996-65140	19960726
PRAI	DK 1995-863		19950727		
	WO 1996-DK330		19960726		

OS MARPAT 126:238622
GI



I

AB Functionalized achiral linker reagents, e.g. I [n = 1-3; Z = bond, C1-C10

chain optionally interrupted by 1-5 heteroatoms; R1 = H-phosphonate, phosphoramidite; R2 = amino protecting groups, e.g., PhCH2O2C, Me3CO2C, 9-fluorenylmethoxycarbonyl, allyloxycarbonyl, F3CCO, phthaloyl and reporter groups, e.g., fluorescein, dansyl, **biotin**, digoxigenin, N-oxyl-4,4-dimethyloxazolidine, N-oxyl-2,2,5,5-tetramethylpyrrolidine, texas red, tetramethylrhodamine, etc.; R3 = H, hydroxy protecting group, e.g., 4,4'-dimethoxytrityl, 9-fluorenylmethoxycarbonyl, etc.] were prepd. and used to incorporate multiple primary amino groups or reporter groups into oligodeoxyribonucleotides following the phosphoramidite methodol. It is possible to substitute any deoxyribonucleotide, deoxynucleotide, or nucleotide with the linker in conventional phosphoramidite or H-phosphonate DNA syntheses. Thus, the bis(hydroxymethyl)benzylamine I (Z = CH2; R1 = H; R2 = 9-fluorenylmethylcarbonyl; R3 = 4,4'-dimethoxytrityl; n = 1) was prepd. from 5-nitroisophthalic acid in seven steps. Application of this reagent in std. solid-support phosphoramidite oligodeoxyribonucleotide prepn. methodol. gave, e.g., 5'-GTAGATCACT-P(O)(OH)OCH2-X-CH2OH-3' [X = 1,3-(5-H2NCH2)C6H3] with 99.5% coupling efficiency.

ST achiral linker oligodeoxyribonucleotide solid phase prepn; amino group incorporation oligodeoxyribonucleotide prepn; aminomethylbenzenedimethanol linker oligodeoxyribonucleotide prepn

IT Solid phase synthesis
(prepn. of bis(hydroxymethyl)benzylamine achiral linker reagents for oligodeoxyribonucleotide solid phase prepn.)

IT DNA
Oligodeoxyribonucleotides
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of bis(hydroxymethyl)benzylamine achiral linker reagents for oligodeoxyribonucleotide solid phase prepn.)

IT 108-67-8, Mesitylene, reactions 610-27-5, 5-Nitrophthalic acid 1074-82-4, Potassium phthalimide 27072-45-3, Fluorescein isothiocyanate 28920-43-6, 9-Fluorenylmethyl chloroformate 35013-72-0 102691-36-1, 2-Cyanoethyl N,N,N',N'-tetraisopropylphosphorodiamidite
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of bis(hydroxymethyl)benzylamine achiral linker reagents for oligodeoxyribonucleotide solid phase prepn.)

IT **99-31-0P**, 5-Aminoisophthalic acid 27129-86-8P, 3,5-Dimethylbenzyl bromide **42122-73-6P** 71176-54-0P, 5-Amino-1,3-benzenedimethanol 146335-23-1P 171082-06-7P 171082-07-8P 171082-08-9DP, LCAA-CPG polymer support 171082-09-0P 188257-47-8P 188257-48-9P 188257-49-0P 188257-50-3P 188257-51-4P 188257-52-5P 188257-53-6DP, LCAA-CPG polymer support 188257-54-7P 188257-55-8P 188257-56-9DP, LCAA-CPG polymer support
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of bis(hydroxymethyl)benzylamine achiral linker reagents for oligodeoxyribonucleotide solid phase prepn.)

IT 171717-18-3P 171717-19-4P 171717-20-7P 171717-21-8P 171717-22-9P 171844-08-9P 188366-81-6P 188366-82-7P 188366-83-8P 188366-85-0P 188366-86-1P 188420-41-9P 188420-42-0P 188420-43-1P 188420-44-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of bis(hydroxymethyl)benzylamine achiral linker reagents for oligodeoxyribonucleotide solid phase prepn.)

L5 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1997:155067 CAPLUS
DN 126:207193
TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon; Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
CS Department of Radiation Oncology, University of Washington, Seattle, WA,

98195, USA
SO Bioconjugate Chemistry (1997), 8(2), 161-172
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
CC 1-6 (Pharmacology)
Section cross-reference(s): 78
AB Several cobalamin (Cbl) dimers have been prepd. for evaluation as potential antiproliferative agents in the treatment of AIDS-related lymphoma. The Cbl dimers were synthesized by crosslinking Cbl carboxylates, produced by acid hydrolysis of the b-, d-, and e-propionamide side chains of cyanocobalamin (CN-Cbl), through an isophthalate mol. Linking mols. were used between the Cbl carboxylates and the isophthalate moiety. The linkers were incorporated to provide a distance between the two Cbl mols. such that the dimeric Cbls might bind two mols. of transcobalamin II (TCII), the Cbl transport protein in plasma. Initially, the linking moiety used was 1,12-diaminododecane, but the resulting dimers had low aq. soly. To improve the soly. of the dimers, 4,7,10-trioxa-1,13-tridecanediamine was employed as the linking moiety. This improved the water soly. of the dimers considerably, while retaining the distance between the Cbl mols. at 41-42 .ANG. (fully extended). To introduce addnl. substitution on Cbl dimers, 5-aminoisophthalic acid was used as the crosslinking reagent. P-Iodobenzoyl and p-(tri-n-butylstannyl)benzoyl conjugates of 5-aminoisophthalate were synthesized and used to prep. Cbl dimers. The stannylbenzoyl-conjugated Cbl dimers were prepd. as precursors to be used in radioiodination reactions, and the iodobenzoyl-conjugated Cbl dimers were prepd. as HPLC stds. for the radioiodinated product. Attempts to iodinate/radioiodinate the stannylbenzoyl Cbl dimers were unsuccessful. Although an explanation for this is not readily apparent, the failure to react may be due to the lipophilicity of the linker used and the steric environment of the two Cbl moieties. A biotinylated deriv. of 5-aminoisophthalate was also synthesized and used to prep. biotinylated-Cbl dimers. In a competitive rhTCII binding assay with [57Co]CN-Cbl, Cbl dimers contg. the lipophilic diaminododecane linking moiety had decreased binding avidities compared to those of Cbl monomers substituted at the same corrin ring carboxylate. However, Cbl dimers contg. the water-solubilizing trioxadiamine linker appeared to have avidities similar to those of the Cbl monomers.
ST cobalamin dimer prepn transcobalamin binding
IT 173341-40-7P 173341-41-8P 173341-42-9P 173341-43-0P 173341-44-1P
173341-46-3P 173341-47-4P 173341-48-5P 173341-52-1P 173341-53-2P
173341-54-3P 188014-66-6P 188014-67-7P 188014-68-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)
IT 12651-28-4, Transcobalamin II
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)
IT 68-19-9P, Cyanocobalamin
RL: PUR (Purification or recovery); PREP (Preparation)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)
IT 58-85-5P, **Biotin 99-31-0P** 26264-28-8P 38218-55-2P
38218-77-8P 160927-56-0P 173341-26-9P 173341-31-6P 173341-49-6P
173341-51-0P 173341-59-8P 188014-58-6P 188014-59-7P 188014-60-0P
188014-61-1P 188014-62-2P 188014-63-3P 188014-64-4P 188014-65-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)

L5 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1991:225167 CAPLUS
DN 114:225167
TI Method of assaying substances and immunoassay element employing .beta.-D-galactosidase
IN Onishi, Akira; Kawakatsu, Satoshi; Ito, Tsukasa; Takahashi, Takenori; Fukaya, Michie
PA Konica Co., Japan
SO Eur. Pat. Appl., 61 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM G01N033-58
ICS G01N033-543; G01N033-52
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 15
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 328106	A2	19890816	EP 1989-102245	19890209
	EP 328106	A3	19901219		
	R: DE, GB				
	JP 01308966	A2	19891213	JP 1989-31530	19890209
	JP 01308967	A2	19891213	JP 1989-31531	19890209
PRAI	JP 1988-29632		19880209		
	JP 1988-29633		19880209		

OS MARPAT 114:225167
AB Disclosed is an assay element and a method of assaying a target substance in a fluid sample. In this method, a) the target substance; b) a substance which specifically binds to the target substance, to which a biol. active substance which does not bind to the target substance is attached, or to which a substance which specifically binds to a biol. active substance which does not bind to the target substance is attached; c) a labeled substance which is the target substance or an analog thereof labeled with .beta.-D-galactosidase, or which is a substance which specifically binds to the target substance, labeled with .beta.-D-galactosidase; d) a substance which specifically binds to the biol. active substance and which does not bind to the target substance, or the biol. active substance, which is fixed to a carrier, which carrier exists in a porous reaction layer of an assay element; and e) a substance which specifically binds to .beta.-D-galactosidase and which changes a signal originated from .beta.-D-galactosidase, which is fixed to said carrier or another carrier which exists in a porous reaction layer of an assay element, are reacted, and the change of the signal from .beta.-D-galactosidase is measured. Human IgG was detd. by mixing the sample with bis(2-hydroxyethyl)iminotris(hydroxymethyl)methane, .beta.-D-galactosidase-labeled human IgG, and **biotin**-bound anti-human IgG antibody and applying the mixt. to an immunoassay element comprising a PET film coated with 1) a soln. contg. gelatin, Triton X-100, 1,2-bis(vinylsulfonyl)ethane, and H2O; 2) a soln. contg. p-aminophenylmercuric acetate-bound Avicel (microcryst. cellulose), Triton X-100, polyvinylpyrrolidone, 5-bromo-4-chloro-3-indolyl-.beta.-D-galactopyranoside, 3,3'-(4,4'-biphenylene)-bis(2,5-diphenyl-2H-tetrazolium chloride), and n-BuOH; 3) a soln. contg. avidin-bound Avicel contg. bovine serum albumin and sucrose, Triton X-100, polyvinylpyrrolidone, and n-BuOH; and 4) a soln. contg. cellulose powder D, Triton X-100, polyvinylpyrrolidone, and n-BuOH. The element was incubated at 37.degree.

for 10 min and then the reflection d. at 546 nm was measured from the side of the support layer.

ST galactosidase immunoassay test strip; human IgG detn galactosidase immunoassay

IT Blood analysis
(IgG of human detn. in, by .beta.-D-galactosidase immunoassay)

IT Antibodies
Antigens
Avidins
RL: ANST (Analytical study)
(in .beta.-D-galactosidase immunoassays)

IT Escherichia coli
(.beta.-D-galactosidase of, in immunoassay)

IT Immunoglobulins
RL: ANST (Analytical study)
(G, detn. of human, by .beta.-D-galactosidase immunoassay test strip)

IT Immunoglobulins
RL: SPN (Synthetic preparation); PREP (Preparation)
(G, reaction products, with .beta.-D-galactosidase, prepn. of, for human IgG detn. by .beta.-D-galactosidase immunoassay)

IT Analysis
(biochem., by specific binding assay using .beta.-D-galactosidase as label)

IT Spectrochemical analysis
(fluorometric, by specific binding assay using .beta.-D-galactosidase as label)

IT Immunochemical analysis
(immunoassay, .beta.-D-galactosidase as label in)

IT Immunochemical analysis
(immunoassay, app., carriers for, using galactosidase label)

IT Avidins
RL: ANST (Analytical study)
(reaction products, with cellulose, .beta.-D-galactosidase immunoassay test strip contg., for human IgG detn.)

IT Spectrochemical analysis
(spectrophotometric, by specific binding assay using .beta.-D-galactosidase as label)

IT Onium compounds
RL: ANST (Analytical study)
(tetrazolium, salts, in .beta.-D-galactosidase immunoassays)

IT 369-07-3, o-Nitrophenyl-.beta.-D-galactopyranoside
RL: ANST (Analytical study)
(IgG of human detn. by .beta.-D-galactosidase immunoassay test strip contg.)

IT 369-07-3 1158-17-4 2818-58-8 7240-90-6 15548-59-1 15572-30-2 17817-20-8 33993-25-8 55508-29-7 78261-89-9 87810-64-8 97753-82-7 99792-79-7D, derivs. 102286-67-9 126787-65-3 126787-65-3D, derivs.
RL: ANST (Analytical study)
(as enzyme substrate in .beta.-D-galactosidase immunoassays)

IT 9031-11-2D, conjugates
RL: ANST (Analytical study)
(in immunoassays)

IT 58-85-5, **Biotin** 5625-37-6, Piperazine-N,N'-bis(2-ethanesulfonic acid) 6976-37-0 7365-45-9 7439-97-6D, Mercury, organo compds. 7440-22-4D, Silver, organo compds. 25976-21-0 29558-05-2, p-Aminophenyl-.beta.-D-thiogalactopyranoside 107537-94-0, Galactostatin
RL: ANST (Analytical study)
(in .beta.-D-galactosidase immunoassays)

IT 9001-46-1DP, Glutamic acid dehydrogenase, anti-human IgG antibody reaction products
RL: SPN (Synthetic preparation); PREP (Preparation)

```
      (prepn. of)
IT   58-85-5DP, Biotin, anti-human IgG antibody reaction products
     99-31-0DP, 5-Aminoisophthalic acid, Avicel reaction products
     6283-24-5DP, p-Aminophenyl mercuric acetate, cellulose reaction products
     9004-34-6DP, Cellulose, p-aminophenyl mercuric acetate reaction products
     16758-34-2DP, Avicel reaction products
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of, for human IgG detn. by .beta.-D-galactosidase immunoassay)
IT   9004-34-6, Avicel, reactions
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with butanedioldiglycidyl ether)
IT   2425-79-8
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with cellulose)
IT   298-95-3
     RL: ANST (Analytical study)
        (.beta.-D-galactosidase immunoassay test strip contg., for human IgG
        detn.)


=> d his

     (FILE 'HOME' ENTERED AT 12:48:52 ON 16 JAN 2003)

     FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003
                E AMINOISOPHTHALIC
L1            66 S E1-E6
L2             0 S FILE CAPLUS

     FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003
L3           597 S L1
                E BIOTIN
L4         22854 S E3
L5            15 S L3 AND L4

=> e linker
E1             1     LINKENBACH/BI
E2             2     LINKENS/BI
E3         12580 --> LINKER/BI
E4             6     LINKER1/BI
E5             5     LINKER2/BI
E6             1     LINKER3/BI
E7             1     LINKERA/BI
E8             1     LINKERAND/BI
E9             1     LINKERB/BI
E10            7     LINKERED/BI
E11            1     LINKERES/BI
E12            1     LINKERHAGNER/BI

=> s e3
L6         12580 LINKER/BI

=> s l3 and l6
L7            17 L3 AND L6

=> d l7 1-17

L7   ANSWER 1 OF 17  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:319261  CAPLUS
DN   137:59601
TI   A Streptavidin-Biotin Binding System That Minimizes Blocking by Endogenous
     Biotin
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AU Hamblett, Kevin J.; Kegley, Brian B.; Hamlin, Don K.; Chyan, Ming-Kuan; Hyre, David E.; Press, Oliver W.; Wilbur, D. Scott; Stayton, Patrick S.
CS Departments of Bioengineering, Medicine, and Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (2002), 13(3), 588-598
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 2001:137180 CAPLUS
DN 134:178346
TI Preparation of novel naphthalenesulfonic acids and related compounds, method of preparation and use as glucose uptake agonists
IN Spevak, Wayne R.; Shi, Songyuan; Prasad, V. V. S. V. Manchem; Kozlowski, Michael R.; Schow, Steven R.; Lum, Robert T.; Robinson, Louise; Park, Jeong Weong
PA Telik, Inc., USA
SO PCT Int. Appl., 94 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001012591	A1	20010222	WO 2000-US20909	20000728
	W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	FR 2796942	A1	20010202	FR 2000-9979	20000728
	BR 2000012836	A	20020430	BR 2000-12836	20000728
	EP 1200396	A1	20020502	EP 2000-952351	20000728
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	NO 2002000425	A	20020325	NO 2002-425	20020128
PRAI	US 1999-146444P	P	19990729		
	WO 2000-US20909	W	20000728		

OS MARPAT 134:178346
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 2000:35037 CAPLUS
DN 132:90367
TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy
IN Wilbur, D. Scott; Sandberg, Bengt E. B.
PA Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent

LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	US 2001023288	A1	20010920	US 2000-750280	20001229
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 2000:35036 CAPLUS
DN 132:90366
TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy
IN Wilbur, D. Scott; Sandberg, Bengt E. B.
PA Department of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				

AU 9883663 A1 20000124 AU 1998-83663 19980707
CA 2336739 AA 20000113 CA 1999-2336739 19990707
WO 2000002051 A1 20000113 WO 1999-SE1241 19990707
W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
AU 9950767 A1 20000124 AU 1999-50767 19990707
EP 1095274 A1 20010502 EP 1999-935251 19990707
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
JP 2002519440 T2 20020702 JP 2000-558395 19990707
NO 2001000021 A 20010307 NO 2001-21 20010103
PRAI WO 1998-SE1345 A 19980707
WO 1999-SE1241 W 19990707
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1999:668186 CAPLUS
DN 132:46430
TI Molecular Necklaces. Cross-Linking Hemoglobin with Reagents Containing Covalently Attached Ligands
AU Crapatureanu, Sanda; Serbanescu, Ruxandra; Brevitt, Sharon Bisley; Kluger, Ronald
CS Lash Miller Laboratories Department of Chemistry, University of Toronto, Toronto, ON, M5S 3H6, Can.
SO Bioconjugate Chemistry (1999), 10(6), 1058-1067
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
OS CASREACT 132:46430
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1999:140535 CAPLUS
DN 130:267698
TI Synthesis of achiral **linker** reagents for direct labeling of oligonucleotides on solid supports
AU Behrens, Carsten; Dahl, Otto
CS Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100, Den.
SO Nucleosides & Nucleotides (1999), 18(2), 291-305
CODEN: NUNUD5; ISSN: 0732-8311
PB Marcel Dekker, Inc.
DT Journal
LA English
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1998:776603 CAPLUS
DN 130:38642
TI Preparation of water soluble vitamin B12 as antiinflammatory receptor modulating agents

IN Morgan, A. Charles, Jr.; Wilbur, D. Scott
PA Receptagen Corporation, USA; University of Washington
SO U.S., 50 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840880	A	19981124	US 1995-406191	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1998:776598 CAPLUS
DN 130:38641
TI Preparation of water soluble vitamin B12 as antiinflammatory receptor modulating agents
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
PA Receptagen Corporation, USA; University of Washington
SO U.S., 66 pp., Cont.-in-part of U.S. Ser. No. 406,191.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840712	A	19981124	US 1995-545151	19951019
	US 5739287	A	19980414	US 1995-406192	19950316
	US 5840880	A	19981124	US 1995-406191	19950316
	US 5869465	A	19990209	US 1995-406194	19950316
	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG				
	AU 9677182	A1	19970507	AU 1996-77182	19961018
	EP 1015475	A1	20000705	EP 1996-940247	19961018
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6083926	A	20000704	US 1998-200422	19981123

PRAI US 1994-224831 B2 19940408
US 1995-406191 A2 19950316
US 1995-406192 A2 19950316
US 1995-406194 A2 19950316
WO 1995-US4404 A2 19950407
US 1995-545151 A 19951019
US 1995-545496 A 19951019
WO 1996-US16672 W 19961018
OS MARPAT 130:38641
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1997:594715 CAPLUS
DN 127:262560
TI Synthetic derivatives of rapamycin as multimerizing agents for chimeric proteins with immunophilin derived domains
IN Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu
PA Ariad Gene Therapeutics, Inc., USA; Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu
SO PCT Int. Appl., 98 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9731899	A1	19970904	WO 1997-US3157	19970228
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2244363	AA	19970904	CA 1997-2244363	19970228
AU 9721927	A1	19970916	AU 1997-21927	19970228
US 6133456	A	20001017	US 1997-808276	19970228
US 6150527	A	20001121	US 1997-808274	19970228
US 2002161240	A1	20021031	US 2002-86506	20020228

PRAI US 1996-12432P P 19960228
US 1996-24861P P 19960828
US 1996-33035P P 19961210
US 1994-292598 B2 19940818
US 1995-479694 A2 19950607
US 1995-793016 B2 19950818
US 1997-808276 A1 19970228
WO 1997-US3157 W 19970228
US 2000-690797 B1 20001017
OS MARPAT 127:262560

L7 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1997:594714 CAPLUS
DN 127:247960
TI Synthetic derivatives of rapamycin as multimerizing agents for chimeric proteins with immunophilin-derived domains
IN Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu
PA Ariad Gene Therapeutics, Inc., USA; Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu
SO PCT Int. Appl., 116 pp.
CODEN: PIXXD2

DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9731898	A1	19970904	WO 1997-US3137	19970228
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2244363	AA	19970904	CA 1997-2244363	19970228
	AU 9719809	A1	19970916	AU 1997-19809	19970228
	AU 731826	B2	20010405		
	EP 888303	A1	19990107	EP 1997-907937	19970228
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2000505475	T2	20000509	JP 1997-531139	19970228
	US 6133456	A	20001017	US 1997-808276	19970228
	US 6150527	A	20001121	US 1997-808274	19970228
	US 2002161240	A1	20021031	US 2002-86506	20020228
PRAI	US 1996-12432P	P	19960228		
	US 1996-24861P	P	19960828		
	US 1996-33035P	P	19961210		
	US 1994-292598	B2	19940818		
	US 1995-479694	A2	19950607		
	US 1995-793016	B2	19950818		
	US 1997-808276	A1	19970228		
	WO 1997-US3137	W	19970228		
	US 2000-690797	B1	20001017		

OS MARPAT 127:247960

L7 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1997:377886 CAPLUS
DN 126:343813
TI Preparation of vitamin B12 receptor modulating agents
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
PA Receptagen Corporation, USA; University of Washington; Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip, M.
SO PCT Int. Appl., 97 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG				
	US 5840712	A	19981124	US 1995-545151	19951019
	AU 9677182	A1	19970507	AU 1996-77182	19961018
	EP 1015475	A1	20000705	EP 1996-940247	19961018
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRAI US 1995-545151 A 19951019
US 1995-545496 A 19951019
US 1994-224831 B2 19940408
US 1995-406191 A2 19950316
US 1995-406192 A2 19950316
US 1995-406194 A2 19950316
WO 1996-US16672 W 19961018
OS MARPAT 126:343813

L7 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1997:251007 CAPLUS
DN 126:238622
TI A new achiral **linker** reagent for the incorporation of multiple amino groups into oligonucleotides
IN Behrens, Carsten; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John; Dahl, Otto
PA Behrens, Carsten, Den.; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John; Dahl, Otto
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9705156	A1	19970213	WO 1996-DK330	19960726
W: AL, AM, AT, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT				
AU 9665140	A1	19970226	AU 1996-65140	19960726

PRAI DK 1995-863 19950727
WO 1996-DK330 19960726
OS MARPAT 126:238622

L7 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1997:155067 CAPLUS
DN 126:207193
TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon; Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(2), 161-172
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

L7 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1997:61195 CAPLUS
DN 126:70131
TI Catalytic antibodies for activation of carbamate-containing prodrugs and their use in ADAPT (Antibody-Directed Abzyme Prodrug Therapy)
IN Blackburn, George Michael; Wentworth, Paul
PA Zeneca Limited, UK
SO Eur. Pat. Appl., 141 pp.
CODEN: EPXXDW
DT Patent

LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 745673	A2	19961204	EP 1996-303643	19960522
	EP 745673	A3	20020731		
	R: CH, DE, FR, GB, IT, LI				
	US 5807688	A	19980915	US 1996-653060	19960524
PRAI	GB 1995-10830	A	19950527		

OS MARPAT 126:70131

L7 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1996:417799 CAPLUS
DN 125:86501
TI Preparation of linked piperidinecarboxylate moieties as immunophilin multimerizing agents
IN Holt, Dennis A.; Schreiber, Stuart; Keenan, Terence; Guo, Tao; Laborde, Edgardo
PA Ariad Gene Therapeutics, Inc., USA; Laborde, Edgardo
SO PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9606097	A1	19960229	WO 1995-US10559	19950818
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2197793	AA	19960229	CA 1995-2197793	19950818
	AU 9533679	A1	19960314	AU 1995-33679	19950818
	EP 776327	A1	19970604	EP 1995-930217	19950818
	R: AT, CH, DE, ES, FR, GB, LI, SE				
	JP 10504571	T2	19980506	JP 1995-508225	19950818
	US 6133456	A	20001017	US 1997-808276	19970228
	US 6150527	A	20001121	US 1997-808274	19970228
	US 2002161240	A1	20021031	US 2002-86506	20020228
PRAI	US 1994-292598	A	19940818		
	US 1995-479694	A	19950607		
	US 1995-793016	B2	19950818		
	WO 1995-US10559	W	19950818		
	US 1996-12432P	P	19960228		
	US 1996-24861P	P	19960828		
	US 1996-33035P	P	19961210		
	US 1997-808276	A1	19970228		
	US 2000-690797	B1	20001017		

OS MARPAT 125:86501

L7 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1995:996981 CAPLUS
DN 124:176815
TI Preparation of vitamin B12 derivatives as receptor modulating agents for treating cancers
IN Morgan, A. Charles; Wilbur, D. Scott; Pathare, Pradip M.
PA USA
SO PCT Int. Appl., 101 pp.
CODEN: PIXXD2

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DT   Patent
LA   English
FAN.CNT 6
     PATENT NO.         KIND  DATE           APPLICATION NO.   DATE
     ---------------    ----  --------       ---------------   --------
PI   WO 9527723          A1   19951019       WO 1995-US4404    19950407
         W:  AU, CA, JP, KR, NO, NZ
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
     US 5739287          A    19980414       US 1995-406192    19950316
     US 5840880          A    19981124       US 1995-406191    19950316
     US 5869465          A    19990209       US 1995-406194    19950316
     AU 9522835          A1   19951030       AU 1995-22835     19950407
     EP 754189           A1   19970122       EP 1995-916284    19950407
     EP 754189           B1   20021009
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
     JP 10502334         T2   19980303       JP 1995-526497    19950407
     AT 225799           E    20021015       AT 1995-916284    19950407
     US 6083926          A    20000704       US 1998-200422    19981123
PRAI US 1994-224831      A    19940408
     US 1995-406191      A    19950316
     US 1995-406192      A    19950316
     US 1995-406194      A    19950316
     WO 1995-US4404      W    19950407
     US 1995-545151      A3   19951019
OS   MARPAT 124:176815

L7   ANSWER 17 OF 17  CAPLUS  COPYRIGHT 2003 ACS
AN   1995:752263  CAPLUS
DN   124:30215
TI   A new achiral reagent for the incorporation of multiple amino groups into
     oligonucleotides
AU   Behrens, Carsten; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John;
     Buchardt, Ole; Dahl, Otto
CS   Dep. Chem., Univ. Copenhagen, Copenhagen, DK-2100, Den.
SO   Bioorganic & Medicinal Chemistry Letters (1995), 5(16), 1785-90
     CODEN: BMCLE8; ISSN: 0960-894X
PB   Elsevier
DT   Journal
LA   English


=> d his

     (FILE 'HOME' ENTERED AT 12:48:52 ON 16 JAN 2003)

     FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003
                E AMINOISOPHTHALIC
L1           66 S E1-E6
L2            0 S FILE CAPLUS

     FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003
L3          597 S L1
                E BIOTIN
L4        22854 S E3
L5           15 S L3 AND L4
                E LINKER
L6        12580 S E3
L7           17 S L3 AND L6

=> s l5 and l7
L8           10 L5 AND L7
```

=> d l8 1-10

L8 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 2002:319261 CAPLUS
DN 137:59601
TI A Streptavidin-**Biotin** Binding System That Minimizes Blocking by Endogenous **Biotin**
AU Hamblett, Kevin J.; Kegley, Brian B.; Hamlin, Don K.; Chyan, Ming-Kuan; Hyre, David E.; Press, Oliver W.; Wilbur, D. Scott; Stayton, Patrick S.
CS Departments of Bioengineering, Medicine, and Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (2002), 13(3), 588-598
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 2000:35037 CAPLUS
DN 132:90367
TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy
IN Wilbur, D. Scott; Sandberg, Bengt E. B.
PA Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	US 2001023288	A1	20010920	US 2000-750280	20001229
	NO 2001000021	A	20010307	NO 2001-21	20010103

PRAI WO 1998-SE1345 A 19980707
WO 1999-SE1241 W 19990707
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 2000:35036 CAPLUS
DN 132:90366
TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy
IN Wilbur, D. Scott; Sandberg, Bengt E. B.
PA Department of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9883663	A1	20000124	AU 1998-83663	19980707
CA 2336739	AA	20000113	CA 1999-2336739	19990707
WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
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AU 9950767	A1	20000124	AU 1999-50767	19990707
EP 1095274	A1	20010502	EP 1999-935251	19990707
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002519440	T2	20020702	JP 2000-558395	19990707
NO 2001000021	A	20010307	NO 2001-21	20010103

PRAI WO 1998-SE1345 A 19980707
WO 1999-SE1241 W 19990707
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 1999:668186 CAPLUS
DN 132:46430
TI Molecular Necklaces. Cross-Linking Hemoglobin with Reagents Containing Covalently Attached Ligands
AU Crapatureanu, Sanda; Serbanescu, Ruxandra; Brevitt, Sharon Bisley; Kluger, Ronald
CS Lash Miller Laboratories Department of Chemistry, University of Toronto, Toronto, ON, M5S 3H6, Can.

SO Bioconjugate Chemistry (1999), 10(6), 1058-1067
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
OS CASREACT 132:46430
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 1999:140535 CAPLUS
DN 130:267698
TI Synthesis of achiral **linker** reagents for direct labeling of oligonucleotides on solid supports
AU Behrens, Carsten; Dahl, Otto
CS Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100, Den.
SO Nucleosides & Nucleotides (1999), 18(2), 291-305
CODEN: NUNUD5; ISSN: 0732-8311
PB Marcel Dekker, Inc.
DT Journal
LA English
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 1998:776603 CAPLUS
DN 130:38642
TI Preparation of water soluble vitamin B12 as antiinflammatory receptor modulating agents
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott
PA Receptagen Corporation, USA; University of Washington
SO U.S., 50 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840880	A	19981124	US 1995-406191	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2003 ACS

AN 1998:776598 CAPLUS
DN 130:38641
TI Preparation of water soluble vitamin B12 as antiinflammatory receptor modulating agents
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
PA Receptagen Corporation, USA; University of Washington
SO U.S., 66 pp., Cont.-in-part of U.S. Ser. No. 406,191.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840712	A	19981124	US 1995-545151	19951019
	US 5739287	A	19980414	US 1995-406192	19950316
	US 5840880	A	19981124	US 1995-406191	19950316
	US 5869465	A	19990209	US 1995-406194	19950316
	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG				
	AU 9677182	A1	19970507	AU 1996-77182	19961018
	EP 1015475	A1	20000705	EP 1996-940247	19961018
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A2	19950316		
	US 1995-406192	A2	19950316		
	US 1995-406194	A2	19950316		
	WO 1995-US4404	A2	19950407		
	US 1995-545151	A	19951019		
	US 1995-545496	A	19951019		
	WO 1996-US16672	W	19961018		

OS MARPAT 130:38641
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 1997:377886 CAPLUS
DN 126:343813
TI Preparation of vitamin B12 receptor modulating agents
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
PA Receptagen Corporation, USA; University of Washington; Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip, M.
SO PCT Int. Appl., 97 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG

	US 5840712	A	19981124	US 1995-545151	19951019
	AU 9677182	A1	19970507	AU 1996-77182	19961018
	EP 1015475	A1	20000705	EP 1996-940247	19961018

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

PRAI	US 1995-545151	A	19951019
	US 1995-545496	A	19951019
	US 1994-224831	B2	19940408
	US 1995-406191	A2	19950316
	US 1995-406192	A2	19950316
	US 1995-406194	A2	19950316
	WO 1996-US16672	W	19961018

OS MARPAT 126:343813

L8 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 1997:251007 CAPLUS
DN 126:238622
TI A new achiral **linker** reagent for the incorporation of multiple amino groups into oligonucleotides
IN Behrens, Carsten; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John; Dahl, Otto
PA Behrens, Carsten, Den.; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John; Dahl, Otto
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9705156	A1	19970213	WO 1996-DK330	19960726

W: AL, AM, AT, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ

RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT

	AU 9665140	A1	19970226	AU 1996-65140	19960726
PRAI	DK 1995-863		19950727		
	WO 1996-DK330		19960726		

OS MARPAT 126:238622

L8 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 1997:155067 CAPLUS
DN 126:207193
TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon; Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(2), 161-172
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

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     FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003
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L2             0 S FILE CAPLUS

     FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003
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                E BIOTIN
L4         22854 S E3
L5            15 S L3 AND L4
                E LINKER
L6         12580 S E3
L7            17 S L3 AND L6
L8            10 S L5 AND L7

=> s l7 not l5
L9             7 L7 NOT L5

=> d l9 1-7

L9   ANSWER 1 OF 7  CAPLUS  COPYRIGHT 2003 ACS
AN   2001:137180  CAPLUS
DN   134:178346
TI   Preparation of novel naphthalenesulfonic acids and related compounds,
     method of preparation and use as glucose uptake agonists
IN   Spevak, Wayne R.; Shi, Songyuan; Prasad, V. V. S. V. Manchem; Kozlowski,
     Michael R.; Schow, Steven R.; Lum, Robert T.; Robinson, Louise; Park,
     Jeong Weong
PA   Telik, Inc., USA
SO   PCT Int. Appl., 94 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.         KIND  DATE           APPLICATION NO.  DATE
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PI   WO 2001012591      A1    20010222       WO 2000-US20909  20000728
         W:  AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
             CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI,
             GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
             KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,
             MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM,
             TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD,
             RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
             CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     FR 2796942         A1    20010202       FR 2000-9979     20000728
     BR 2000012836      A     20020430       BR 2000-12836    20000728
     EP 1200396         A1    20020502       EP 2000-952351   20000728
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL
     NO 2002000425      A     20020325       NO 2002-425      20020128
PRAI US 1999-146444P    P     19990729
     WO 2000-US20909    W     20000728
OS   MARPAT 134:178346
RE.CNT  3      THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9   ANSWER 2 OF 7  CAPLUS  COPYRIGHT 2003 ACS
```

AN 1997:594715 CAPLUS
DN 127:262560
TI Synthetic derivatives of rapamycin as multimerizing agents for chimeric proteins with immunophilin derived domains
IN Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu
PA Ariad Gene Therapeutics, Inc., USA; Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu
SO PCT Int. Appl., 98 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9731899	A1	19970904	WO 1997-US3157	19970228
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2244363	AA	19970904	CA 1997-2244363	19970228
	AU 9721927	A1	19970916	AU 1997-21927	19970228
	US 6133456	A	20001017	US 1997-808276	19970228
	US 6150527	A	20001121	US 1997-808274	19970228
	US 2002161240	A1	20021031	US 2002-86506	20020228
PRAI	US 1996-12432P	P	19960228		
	US 1996-24861P	P	19960828		
	US 1996-33035P	P	19961210		
	US 1994-292598	B2	19940818		
	US 1995-479694	A2	19950607		
	US 1995-793016	B2	19950818		
	US 1997-808276	A1	19970228		
	WO 1997-US3157	W	19970228		
	US 2000-690797	B1	20001017		

OS MARPAT 127:262560

L9 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2003 ACS
AN 1997:594714 CAPLUS
DN 127:247960
TI Synthetic derivatives of rapamycin as multimerizing agents for chimeric proteins with immunophilin-derived domains
IN Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu
PA Ariad Gene Therapeutics, Inc., USA; Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu
SO PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9731898	A1	19970904	WO 1997-US3137	19970228
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN,				

ML, MR, NE, SN, TD, TG

	CA 2244363	AA	19970904	CA 1997-2244363	19970228
	AU 9719809	A1	19970916	AU 1997-19809	19970228
	AU 731826	B2	20010405		
	EP 888303	A1	19990107	EP 1997-907937	19970228
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2000505475	T2	20000509	JP 1997-531139	19970228
	US 6133456	A	20001017	US 1997-808276	19970228
	US 6150527	A	20001121	US 1997-808274	19970228
	US 2002161240	A1	20021031	US 2002-86506	20020228
PRAI	US 1996-12432P	P	19960228		
	US 1996-24861P	P	19960828		
	US 1996-33035P	P	19961210		
	US 1994-292598	B2	19940818		
	US 1995-479694	A2	19950607		
	US 1995-793016	B2	19950818		
	US 1997-808276	A1	19970228		
	WO 1997-US3137	W	19970228		
	US 2000-690797	B1	20001017		

OS MARPAT 127:247960

L9 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2003 ACS
AN 1997:61195 CAPLUS
DN 126:70131
TI Catalytic antibodies for activation of carbamate-containing prodrugs and their use in ADAPT (Antibody-Directed Abzyme Prodrug Therapy)
IN Blackburn, George Michael; Wentworth, Paul
PA Zeneca Limited, UK
SO Eur. Pat. Appl., 141 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 745673	A2	19961204	EP 1996-303643	19960522
	EP 745673	A3	20020731		
	R: CH, DE, FR, GB, IT, LI				
	US 5807688	A	19980915	US 1996-653060	19960524
PRAI	GB 1995-10830	A	19950527		

OS MARPAT 126:70131

L9 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2003 ACS
AN 1996:417799 CAPLUS
DN 125:86501
TI Preparation of linked piperidinecarboxylate moieties as immunophilin multimerizing agents
IN Holt, Dennis A.; Schreiber, Stuart; Keenan, Terence; Guo, Tao; Laborde, Edgardo
PA Ariad Gene Therapeutics, Inc., USA; Laborde, Edgardo
SO PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9606097	A1	19960229	WO 1995-US10559	19950818
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ,				

TM, TT
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

	CA 2197793	AA	19960229	CA 1995-2197793	19950818
	AU 9533679	A1	19960314	AU 1995-33679	19950818
	EP 776327	A1	19970604	EP 1995-930217	19950818
	R: AT, CH, DE, ES, FR, GB, LI, SE				
	JP 10504571	T2	19980506	JP 1995-508225	19950818
	US 6133456	A	20001017	US 1997-808276	19970228
	US 6150527	A	20001121	US 1997-808274	19970228
	US 2002161240	A1	20021031	US 2002-86506	20020228
PRAI	US 1994-292598	A	19940818		
	US 1995-479694	A	19950607		
	US 1995-793016	B2	19950818		
	WO 1995-US10559	W	19950818		
	US 1996-12432P	P	19960228		
	US 1996-24861P	P	19960828		
	US 1996-33035P	P	19961210		
	US 1997-808276	A1	19970228		
	US 2000-690797	B1	20001017		

OS MARPAT 125:86501

L9 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS
AN 1995:996981 CAPLUS
DN 124:176815
TI Preparation of vitamin B12 derivatives as receptor modulating agents for treating cancers
IN Morgan, A. Charles; Wilbur, D. Scott; Pathare, Pradip M.
PA USA
SO PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5739287	A	19980414	US 1995-406192	19950316
	US 5840880	A	19981124	US 1995-406191	19950316
	US 5869465	A	19990209	US 1995-406194	19950316
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	A	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		

OS MARPAT 124:176815

L9 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS
AN 1995:752263 CAPLUS
DN 124:30215
TI A new achiral reagent for the incorporation of multiple amino groups into

```
     oligonucleotides
AU   Behrens, Carsten; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John;
     Buchardt, Ole; Dahl, Otto
CS   Dep. Chem., Univ. Copenhagen, Copenhagen, DK-2100, Den.
SO   Bioorganic & Medicinal Chemistry Letters (1995), 5(16), 1785-90
     CODEN: BMCLE8; ISSN: 0960-894X
PB   Elsevier
DT   Journal
LA   English


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L1           66 S E1-E6
L2            0 S FILE CAPLUS

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                E BIOTIN
L4        22854 S E3
L5           15 S L3 AND L4
                E LINKER
L6        12580 S E3
L7           17 S L3 AND L6
L8           10 S L5 AND L7
L9            7 S L7 NOT L5

=> s tridecanediamine
L10         71 TRIDECANEDIAMINE

=> s avidin
L11       6520 AVIDIN

=> s l10 and l11
L12          3 L10 AND L11

=> d l12 1-3

L12  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:523951  CAPLUS
DN   137:228855
TI   Trifunctional conjugation reagents. Reagents that contain a biotin and a
     radiometal chelation moiety for application to extracorporeal affinity
     adsorption of radiolabeled antibodies
AU   Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.;
     Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin
CS   Department of Radiation Oncology, University of Washington, Seattle, WA,
     98195, USA
SO   Bioconjugate Chemistry (2002), 13(5), 1079-1092
     CODEN: BCCHES; ISSN: 1043-1802
PB   American Chemical Society
DT   Journal
LA   English
RE.CNT  62    THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12  ANSWER 2 OF 3  CAPLUS  COPYRIGHT 2003 ACS
AN   2001:923565  CAPLUS
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DN 136:42919
TI Biotin derivatives for an extracorporeal device
IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
PA Mitra Medical Technology AB, Swed.; University of Washington
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		
	W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2002159994	A1	20021031	US 2001-881213	20010615
	AU 2001074761	A5	20011224	AU 2001-74761	20010618
PRAI	SE 2000-2287	A	20000616		
	US 2000-216625P	P	20000707		
	WO 2001-SE1374	W	20010618		

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS
AN 1996:664622 CAPLUS
DN 126:3868
TI Antibody Fragments in Tumor Pretargeting. Evaluation of Biotinylated Fab' Colocalization with Recombinant Streptavidin and **Avidin**
AU Wilbur, D. Scott; Hamlin, Donald K.; Vessella, Robert L.; Stray, James E.; Buhler, Kent R.; Stayton, Patrick S.; Klumb, Lisa A.; Pathare, Pradip M.; Weerawarna, S. Ananda
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1996), 7(6), 689-702
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

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L2 0 S FILE CAPLUS

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L4 22854 S E3
L5 15 S L3 AND L4
E LINKER
L6 12580 S E3

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L8            10 S L5 AND L7
L9             7 S L7 NOT L5
L10           71 S TRIDECANEDIAMINE
L11         6520 S AVIDIN
L12            3 S L10 AND L11

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L4 IS NOT VALID HERE
For an explanation, enter "HELP DISPLAY".

=> s l10 and l4
L13          15 L10 AND L4

=> d l13 1-15

L13  ANSWER 1 OF 15  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:869122  CAPLUS
DN   137:364361
TI   Methods for fragmenting and labeling nucleic acids for diagnosis of
     diseases
IN   Bourget, Cecile; Kotera, Mitsuharu; Lhomme, Jean; Trevisiol, Emmanuelle;
     Laayoun, Ali; Tora, Christelle; Sothier, Isabelle
PA   Bio Merieux, Fr.; Universite Joseph Fourier (Grenoble 1); Centre National
     De La Recherche Scientifique
SO   PCT Int. Appl., 161 pp.
     CODEN: PIXXD2
DT   Patent
LA   French
FAN.CNT 1
     PATENT NO.         KIND  DATE           APPLICATION NO.  DATE
     ---------------    ----  --------       ---------------  --------
PI   WO 2002090584      A2    20021114       WO 2002-FR1542   20020503
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
             TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
             CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     FR 2824335          A1    20021108       FR 2001-6039     20010504
PRAI FR 2001-6039        A     20010504
OS   MARPAT 137:364361

L13  ANSWER 2 OF 15  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:868900  CAPLUS
DN   137:371372
TI   Indicator dyes, their production and their use in detecting biological
     molecules
IN   Bourget, Cecile; Lhomme, Jean; Laayoun, Ali; Kotera, Mitsuharu; Trevisiol,
     Emmanuelle; Menou, Lionel; Bernal Mendez, Eloy
PA   Bio Merieux, Fr.; Universite Joseph Fourier (Grenoble 1); Centre National
     De La Recherche Scientifique
SO   PCT Int. Appl., 219 pp.
     CODEN: PIXXD2
DT   Patent
LA   French
FAN.CNT 1
     PATENT NO.         KIND  DATE           APPLICATION NO.  DATE
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PI	WO 2002090319	A1	20021114	WO 2002-FR1543	20020503
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	FR 2824323	A1	20021108	FR 2001-6040	20010504
PRAI	FR 2001-6040	A	20010504		

OS MARPAT 137:371372
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2002:523951 CAPLUS
DN 137:228855
TI Trifunctional conjugation reagents. Reagents that contain a **biotin** and a radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies
AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.; Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (2002), 13(5), 1079-1092
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2001:923565 CAPLUS
DN 136:42919
TI **Biotin** derivatives for an extracorporeal device
IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
PA Mitra Medical Technology AB, Swed.; University of Washington
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		
	W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2002159994	A1	20021031	US 2001-881213	20010615

	AU 2001074761	A5	20011224	AU 2001-74761	20010618
PRAI	SE 2000-2287	A	20000616		
	US 2000-216625P	P	20000707		
	WO 2001-SE1374	W	20010618		

L13 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2001:816683 CAPLUS
DN 135:353710
TI eTag reporter compounds for oligonucleotide and protein labeling and identification
IN Singh, Sharat; Matray, Tracy; Salinmi-moosavi, Hussein
PA Aclara Biosciences, Inc., USA
SO PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001083502	A1	20011108	WO 2000-US29724	20001027
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 2000-561579	A	20000428		
	US 2000-602586	A	20000621		

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2001:284303 CAPLUS
DN 135:42876
TI Peptide and small molecule microarray for high throughput cell adhesion and functional assays
AU Falsey, James R.; Renil, M.; Park, Steven; Li, Shijun; Lam, Kit S.
CS UC Davis Cancer Center Division of Hematology/Oncology and Department of Internal Medicine, University of California Davis, Sacramento, CA, 95817, USA
SO Bioconjugate Chemistry (2001), 12(3), 346-353
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2001:215618 CAPLUS
DN 135:15624
TI Surface Characterization of Mixed Self-Assembled Monolayers Designed for Streptavidin Immobilization
AU Nelson, Kjell E.; Gamble, Lara; Jung, Linda S.; Boeckl, Maximiliane S.; Naeemi, Esmaeel; Golledge, Stephen L.; Sasaki, Tomikazu; Castner, David G.; Campbell, Charles T.; Stayton, Patrick S.
CS Department of Bioengineering Department of Chemistry and Department of Chemical Engineering, University of Washington, Seattle, WA, 98195, USA
SO Langmuir (2001), 17(9), 2807-2816

CODEN: LANGD5; ISSN: 0743-7463
PB American Chemical Society
DT Journal
LA English
RE.CNT 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2001:201927 CAPLUS
TI Synthesis and evaluation of protein biotinylation reagents that also contain UV and/or fluorescence absorbing moieties
AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Sandberg, Bengt E. B.
CS Radiation Oncology, University of Washington, Seattle, WA, 98103, USA
SO Abstr. Pap. - Am. Chem. Soc. (2001), 221st, MEDI-031
CODEN: ACSRAL; ISSN: 0065-7727
PB American Chemical Society
DT Journal; Meeting Abstract
LA English

L13 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2000:145059 CAPLUS
DN 132:191408
TI Rapid quantitative analysis of proteins or protein function in complex mixtures using affinity labeling reagents and mass spectrometry
IN Aebersold, Rudolf Hans; Gelb, Michael H.; Gygi, Steven P.; Scott, C. Ronald; Turecek, Frantisek; Gerber, Scott A.; Rist, Beate
PA University of Washington, USA
SO PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000011208	A1	20000302	WO 1999-US19415	19990825
	W: AU, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9956913	A1	20000314	AU 1999-56913	19990825
	EP 1105517	A1	20010613	EP 1999-943915	19990825
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002523058	T2	20020730	JP 2000-566460	19990825
	JP 3345401	B2	20021118		
	US 2002076739	A1	20020620	US 2001-839884	20010420
PRAI	US 1998-97788P	P	19980825		
	US 1998-99113P	P	19980903		
	US 1999-383062	A3	19990825		
	WO 1999-US19415	W	19990825		

OS MARPAT 132:191408
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1999:255414 CAPLUS
DN 131:70769
TI Site-Specific Modification of a Single-Chain Antibody Using a Novel Glyoxylyl-Based Labeling Reagent
AU Zhao, Zhan G.; Im, Jin S.; Lam, Kit S.; Lake, Douglas F.
CS Arizona Cancer Center, Tucson, AZ, 85724, USA
SO Bioconjugate Chemistry (1999), 10(3), 424-430

CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1997:708440 CAPLUS
DN 127:298612
TI **Biotin** Reagents for Antibody Pretargeting. 2. Synthesis and in Vitro Evaluation of **Biotin** Dimers and Trimers for Crosslinking of Streptavidin
AU Wilbur, D. Scott; Pathare, Pradip M.; Hamlin, Donald K.; Weerawarna, S. Ananda
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(6), 819-832
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

L13 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1997:542454 CAPLUS
DN 127:220519
TI Preparation of **biotin** containing compounds with water soluble linker moieties for use as radionuclides and streptavidin crosslinking agents
IN Wilbur, Scott D.; Pathare, Pradip M.; Weerawarna, S. Ananda; Hamlin, Donald K.
PA Board of Regents of the University of Washington, USA
SO PCT Int. Appl., 80 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9729114	A1	19970814	WO 1997-US2560	19970207
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9720524	A1	19970828	AU 1997-20524	19970207
PRAI	US 1996-11321P	P	19960208		
	WO 1997-US2560	W	19970207		

L13 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1997:433652 CAPLUS
DN 127:121587
TI **Biotin** reagents for antibody pretargeting. Synthesis, radioiodination and in vitro evaluation of water soluble, biotinidase resistant **biotin** derivatives
AU Wilbur, D. Scott; Hamlin, Donald K.; Pathare, Pradip M.; Weerawarna, S. Ananda
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA

SO Bioconjugate Chemistry (1997), 8(4), 572-584
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

L13 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1997:155067 CAPLUS
DN 126:207193
TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon; Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(2), 161-172
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

L13 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1996:664622 CAPLUS
DN 126:3868
TI Antibody Fragments in Tumor Pretargeting. Evaluation of Biotinylated Fab' Colocalization with Recombinant Streptavidin and Avidin
AU Wilbur, D. Scott; Hamlin, Donald K.; Vessella, Robert L.; Stray, James E.; Buhler, Kent R.; Stayton, Patrick S.; Klumb, Lisa A.; Pathare, Pradip M.; Weerawarna, S. Ananda
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1996), 7(6), 689-702
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

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(FILE 'HOME' ENTERED AT 12:48:52 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003
E AMINOISOPHTHALIC
L1 66 S E1-E6
L2 0 S FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003
L3 597 S L1
E BIOTIN
L4 22854 S E3
L5 15 S L3 AND L4
E LINKER
L6 12580 S E3
L7 17 S L3 AND L6
L8 10 S L5 AND L7
L9 7 S L7 NOT L5
L10 71 S TRIDECANEDIAMINE
L11 6520 S AVIDIN
L12 3 S L10 AND L11
L13 15 S L10 AND L4

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L15 14 L13 NOT L7

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L16 2 L15 NOT L14

=> d l16 1-2 all

L16 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2002:523951 CAPLUS
DN 137:228855
TI Trifunctional conjugation reagents. Reagents that contain a **biotin** and a radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies
AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.; Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (2002), 13(5), 1079-1092
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
CC 9-14 (Biochemical Methods)
Section cross-reference(s): 8, 15, 63
AB A method of removing radiolabeled monoclonal antibodies (mAbs) from blood using a device external to the body, termed extracorporeal affinity-adsorption (EAA), is being evaluated as a means of decreasing irradn. of noncancerous tissues in therapy protocols. The EAA device uses an avidin column to capture biotinylated-radiolabeled mAbs from circulated blood. In this investigation, three trifunctional reagents have been developed to minimize the potential deleterious effect on antigen binding brought about by the combination of radiolabeling and biotinylation of mAbs required in the EAA approach. The studies focused on radiolabeling with 111In and 90Y, so the chelates CHX-A''-DTPA and DOTA, which form stable attachments to these radionuclides, were incorporated in the trifunctional reagents. The first trifunctional reagent prepd. did not incorporate a group to block the **biotin** cleaving enzyme biotinidase, but the two subsequent reagents coupled aspartic acid to the **biotin** carboxylate for that purpose. All three reagents used 4,7,10-trioxa-1,13-**tridecanediamine** as water-sol. spacers between an aminoisophthalate core and the **biotin** or chelation group. The mAb conjugates were radioiodinated to evaluate cell binding as a function of substitution. Radioiodination was used so that a direct comparison with unmodified mAb could be made. Evaluation of the no. of conjugates per antibody vs. cell binding immunoreactivities indicated that minimizing the no. of conjugates was best. Interestingly, a decrease of radioiodination yield as a function of the no. of isothiocyanate contg. conjugates per mAb was noted. The decreased yields were presumably due to the presence of thiourea functionality formed in the conjugation reaction. Radiolabeling with 111In and 90Y was facile at room temp. for conjugates contg. the CHX-A'', but elevated temp. (e.g., 45.degree.) was required to obtain good yields with the DOTA chelate. Stability of 90Y labeled mAb in serum, and when challenged with 10 mM EDTA, was high. However, challenging the 90Y labeled mAb with 10 mM DTPA demonstrated high stability for the DOTA contg. conjugate, but low stability for the CHX-A'' contg. conjugate. Thus, the choice between these two chelating moieties might be made on requirements for facile and gentle labeling vs. very high in vivo stability. Application of the trifunctional biotinylation reagents to the

blood clearance of labeled antibodies in EAA is under investigation. The new reagents may also be useful for other applications.

ST trifunctional conjugation reagent **biotin** radiometal chelation

IT Antibodies
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(monoclonal; trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

IT Affinity
Blood analysis
Blood serum
Chelation
(trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

IT Chelates
Radionuclides, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

IT 10098-91-6, Yttrium-90, analysis 15750-15-9, Indium-111, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

IT 99-31-0 127985-74-4 137174-07-3 178446-63-4 183896-00-6 194920-62-2 295322-53-1 459134-72-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

IT 380607-61-4P 459134-70-4P 459134-73-7P 459134-74-8P 459134-75-9P 459134-76-0P 459409-35-9P 459409-37-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

IT 459134-77-1P 459134-78-2P 459409-36-0P 459409-38-2P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD

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(2) Baker, H; Ann N Y Acad Sci 1985, V447, P129 CAPLUS
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L16 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2001:923565 CAPLUS
DN 136:42919
TI **Biotin** derivatives for an extracorporeal device
IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
PA Mitra Medical Technology AB, Swed.; University of Washington
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K
CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 26

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		
	W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2002159994	A1	20021031	US 2001-881213	20010615
	AU 2001074761	A5	20011224	AU 2001-74761	20010618
PRAI	SE 2000-2287	A	20000616		
	US 2000-216625P	P	20000707		
	WO 2001-SE1374	W	20010618		

AB A method for the conditioning of an extracorporeal device is described, as well as a method for extracorporeal extn. of toxic material from mammalian body fluids in connection with diagnosis or treatment of a mammalian condition or disease. The methods comprise (i) a soln. contg. a reagent comprising **biotin** moieties, such as natural **biotin** or its derivs., and a toxin-binding moiety, (ii) linkers and a trifunctional crosslinking moiety, and (ii) an extracorporeal device comprising said reagent. For example, a dibiotin compd., 1-isothiocyanato-3,5-bis-(13'-biotinamidyl-4',7',10'-trioxatridecanamidyl)-aminoisophthalate was prepd. and conjugated with a toxin-binding mol., i.e., monoclonal antibody 53-6A2. A dibiotin-toxin-binding conjugate was used for conditioning of an avidin-agarose column suitable for removal of toxins from blood.

ST **biotin** deriv prepn reagent extracorporeal toxin extn; body fluid toxin extn extracorporeal **biotin** reagent

IT Histocompatibility antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HLA, antibodies against; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Imaging
(NMR; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and therapy)

IT Intercalation
(agents; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies
RL: REM (Removal or disposal); PROC (Process)
(anti-blood group; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Blood-group substances
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antibodies against; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Avidins
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**biotin** derivs.-binding coatings; prepn. of **biotin**

derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Immunity
(cells involved in, removal of; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Avidins
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates, with agarose; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Animal cell
(diseased, removal of; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Toxins
RL: REM (Removal or disposal); PROC (Process)
(endotoxins; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Toxins
RL: REM (Removal or disposal); PROC (Process)
(enterotoxins; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Circulation
Extraction
(extracorporeal; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Chelating agents
(for radionuclides; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Immunoglobulins
RL: REM (Removal or disposal); PROC (Process)
(fragments; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monoclonal, conjugates, with dibiotin compd.; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies
RL: REM (Removal or disposal); PROC (Process)
(monoclonal; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Amino group
Blood
Body fluid
Carboxyl group
Chemotherapy
Cytotoxic agents
Dyes
Extraction columns
Hydroxyl group
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Chelates
Cytokines
Metals, processes
Oligodeoxyribonucleotides
Peptides, processes
Radionuclides, processes
Toxins
Tumor necrosis factors
RL: REM (Removal or disposal); PROC (Process)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Diagnosis
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and disease treatment)

IT Positron-emission tomography
Scintigraphy
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and therapy)

IT Transplant and Transplantation
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids prior to transplantation)

IT Bacteria (Eubacteria)
Virus
(toxins; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Disease, animal
(treatment; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and disease treatment)

IT Reagents
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tribiotinylated; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Neoplasm
(uptake, monitoring of; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(xenoantibodies, antibodies against; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 9013-20-1, Streptavidin
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**biotin** derivs.-binding coatings; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 9012-36-6D, Agarose, conjugates with avidin
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 58-85-5, **Biotin** 99-31-0, 5-Aminoisophthalic acid 4246-51-9, 4,7,10,Trioxa-1,13-**tridecanediamine** 24424-99-5, Di-tert-butyl dicarbonate 142685-25-4, 2,3,5,6-Tetrafluorophenyl trifluoroacetate 380607-49-8

RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 173341-32-7P 178446-63-4P 183896-00-6P 380607-50-1P 380607-51-2P 380607-56-7P 380607-60-3P 380607-61-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 380607-52-3P 380607-54-5P
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 194920-56-4P 194920-58-6P 380607-48-7P 380607-52-3DP, conjugates with monoclonal antibodies 380607-53-4P 380607-55-6P 380607-57-8P 380607-58-9P 380607-59-0P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 533-48-2, Desthiobiotin 535-87-5, 3,5-Diaminobenzoic acid 554-95-0, 1,3,5-Benzene tricarboxylic acid 669-72-7, Nor-**biotin** 1784-22-1, Homobiotin 3376-83-8, **Biotin** sulfoxide 13395-35-2, Iminobiotin 14474-91-0, Oxybiotin 22342-46-7, Diaminobiotin 40720-05-6, **Biotin** sulfone
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 58-85-5D, **Biotin**, derivs.
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(radiolabeled; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

=> d l15 8-15 all

L15 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 2001:201927 CAPLUS
TI Synthesis and evaluation of protein biotinylation reagents that also contain UV and/or fluorescence absorbing moieties
AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Sandberg, Bengt E. B.
CS Radiation Oncology, University of Washington, Seattle, WA, 98103, USA
SO Abstr. Pap. - Am. Chem. Soc. (2001), 221st, MEDI-031
CODEN: ACSRAL; ISSN: 0065-7727
PB American Chemical Society
DT Journal; Meeting Abstract
LA English
AB Two new biotinylation reagents have been prepd. The reagents are trifunctional in that they contain a **biotin** moiety, a fluorescein or cyanocobalamin moiety, and an amine reactive functionality, Ph isothiocyanate. The **biotin** moiety is stabilized from biotinidase cleavage by coupling with an aspartate moiety, and the **biotin**-aspartate is sepd. from the phenylisothiocyanate moiety by a linker mol., 4,7,10-trioxa-1,13-**tridecanediamine**. The UV and fluorescent absorbing moieties are also linked to the phenylisothiocyanate via the a trioxatridecanediamine moiety. The new biotinylation reagents were prepd. primarily for use when the amt. of protein being biotinylated is limited. Quantification of the no. of **biotin** moieties per

protein mol. is difficult using the std. HABA dye method when small (i.e .mu.g quantities) of protein are used. A comparison of the quantification of nos. of **biotin** moieties/protein obtained via the HABA method and those obtained by direct measurement from absorption in UV and fluorescence will be provided.

L15 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 2000:145059 CAPLUS
DN 132:191408
TI Rapid quantitative analysis of proteins or protein function in complex mixtures using affinity labeling reagents and mass spectrometry
IN Aebersold, Rudolf Hans; Gelb, Michael H.; Gygi, Steven P.; Scott, C. Ronald; Turecek, Frantisek; Gerber, Scott A.; Rist, Beate
PA University of Washington, USA
SO PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-00
ICS G01N033-573; G01N033-53; G01N033-567; G01N024-00
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 6, 7, 26
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000011208	A1	20000302	WO 1999-US19415	19990825
	W: AU, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9956913	A1	20000314	AU 1999-56913	19990825
	EP 1105517	A1	20010613	EP 1999-943915	19990825
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002523058	T2	20020730	JP 2000-566460	19990825
	JP 3345401	B2	20021118		
	US 2002076739	A1	20020620	US 2001-839884	20010420
PRAI	US 1998-97788P	P	19980825		
	US 1998-99113P	P	19980903		
	US 1999-383062	A3	19990825		
	WO 1999-US19415	W	19990825		

OS MARPAT 132:191408
AB Anal. reagents and mass spectrometry-based methods using these reagents for the rapid, and quant. anal. of proteins or protein function in mixts. of proteins are disclosed. The methods employ affinity labeled protein reactive reagents having three portions: an affinity label (A) covalently linked to a protein reactive group (PRG) through a linker group (L). The linker may be differentially isotopically labeled, e.g., by substitution of one or more atoms in the linker with a stable isotope thereof. These reagents allow for the selective isolation of peptide fragments or the products of reaction with a given protein (e.g., products of enzymic reaction) from complex mixts. The isolated peptide fragments or reaction products are characteristic of the presence of a protein or the presence of a protein function in those mixts. Isolated peptides or reaction products are characterized by mass spectrometric (MS) techniques. The reagents also provide for differential isotopic labeling of the isolated peptides or reaction products which facilitates quant. detn. by mass spectrometry of the relative amt. of proteins in different samples. The methods of this invention can be used for qual. and quant. anal. of global protein expression profiles in cells and tissues, to screen for and identify proteins whose expression level in cells, tissue or biol. fluids is affected by a stimulus or by a change in condition or cell state of the cell, tissue or organism from which the sample originated. A conjugate of

N-methylglycylbiotinamide acid and the Michael addn. product of 4,7,10-trioxa-1,13-**tridecanediamine** and p-acrylamidophenyl-.beta.-D-galactopyranoside was prepd. for detecting .beta.-D-galactosidase deficiency and GM1-gangliosidosis.

ST protein affinity labeling reagent mass spectrometry; isotope labeling reagent protein mass spectrometry; function protein analysis; enzyme substrate affinity isotope label reagent; **biotin** conjugate reagent galactosidase GM1 gangliosidosis

IT Glycols, biological studies
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1,2-, conjugates with labeled protein-reactive reagents; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Gangliosidosis
(GM1 gangliosidosis; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Mucopolysaccharidosis
(Sanfilippo's syndrome, type B or D; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Enzymes, analysis
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(affinity labeling reagents contg. substrates for; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Amino group
Sulfhydryl group
(affinity labeling reagents reactive with, of proteins; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Carboxylic acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(affinity labeling reagents reactive with, of proteins; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Peptides, analysis
RL: ANT (Analyte); FMU (Formation, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
(affinity-tagged, tagged proteins converted to; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Protein sequence analysis
(by tandem mass spectrometry; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Haptens
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(conjugates, with labeled protein-reactive reagents; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Tandem mass spectrometry
Tandem mass spectrometry
(electrospray-ionization; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Congenital malformations

Lysosomal storage disease
(enzyme deficiency assocd. with; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Fibroblast
(enzyme reagent response to, of patients with and without .beta.-galactosidase deficiency; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Disease, animal
(enzyme-deficiency; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Avidins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(immobilized, affinity column; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Disulfide group
(linker contg., in labeling reagents; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Mass spectrometry
Mass spectrometry
(liq. chromatog. combined with; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Liquid chromatography
Liquid chromatography
(mass spectrometry combined with; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(membrane; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Stress, animal
(phys., proteins expressed in response to; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Saccharomyces cerevisiae
(protein expression in, with galactose or ethanol as carbon source; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Isotopes
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(protein-reactive affinity reagent labeled with; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Environment
Nutrition, animal
(proteins expressed in response to different conditions in; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Chemicals
(proteins expressed in response to different; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Organelle
(proteins of; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Chromatography

Functional groups
Mass spectrometry
Tandem mass spectrometry
Test kits
(rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Proteins, general, analysis
RL: AMX (Analytical matrix); ANT (Analyte); PRP (Properties); ANST (Analytical study)
(rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Ovalbumin
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Reagents
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Cell
(subcellular fractions of, proteins of; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Electrospray ionization mass spectrometry
Electrospray ionization mass spectrometry
(tandem; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Lactalbumins
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(.alpha.-; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 9031-11-2, .beta.-Galactosidase 9032-94-4 37288-40-7 37289-41-1, Heparin sulfamidase 60320-99-2, N-Acetylglucosamine-6-sulfatase
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(affinity labeling reagents contg. substrates for; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 1192-20-7, Homoserine lactone
RL: RCT (Reactant); RACT (Reactant or reagent)
(affinity labeling reagents reactive with, of proteins; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 221565-10-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(as GM1 internal std.; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-59-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(as deuterated analog; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-28-7P 259874-29-8P
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(as enzyme substrate reagent; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 221565-11-3P 259874-61-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(as internal std.; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-31-2 259874-32-3
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as labeled internal std.; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 221565-07-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(as reagent for diagnosing Sanfilippo syndrome type B; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-55-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(as reagent for diagnosing Sanfilippo syndrome type D; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 252730-69-1 252730-69-1D, deuterium-labeled
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(as reagent; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-30-1
RL: ANT (Analyte); FMU (Formation, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
(enzyme reagent cleavage to; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 58-85-5 107-13-1, 2-Propenenitrile, reactions 111-46-6, reactions 407-25-0, Trifluoroacetic anhydride 769-39-1, 2,3,5,6-Tetrafluorophenol 13515-93-0, N-Methylglycine methyl ester hydrochloride 182267-11-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(in prepn. of reagent for diagnosing GM1-gangliosidosis; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 22397-31-5P 24997-19-1P 53807-26-4P, 2-Propenenitrile-2,3,3-d3 112935-57-6P 142685-25-4P, 2,3,5,6-Tetrafluorophenyl trifluoroacetate 154024-76-7P 173341-32-7P 194920-70-2P 259874-33-4P 259874-35-6P 259874-36-7P 259874-38-9P 259874-39-0P 259874-40-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in prepn. of reagent for diagnosing GM1-gangliosidosis; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 221565-06-6P 259874-34-5P 259874-37-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(in prepn. of reagent for diagnosing GM1-gangliosidosis; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 814-68-6, Acryloyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(in prepn. of reagent for diagnosing Sanfilippo syndrome type B; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 3386-87-6P 14419-59-1P 135253-87-1P 259874-41-4P 259874-42-5P

259874-43-6P 259874-47-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in prepn. of reagent for diagnosing Sanfilippo syndrome type B; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-45-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(in prepn. of reagent for diagnosing Sanfilippo syndrome type B; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-51-6P 259874-53-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in prepn. of reagent for diagnosing Sanfilippo syndrome type D; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 693-57-2 1670-26-4, Sphingosylphosphorylcholine 2238-90-6, Psychosine 2997-01-5 4246-51-9 259874-25-4 259874-26-5 259874-27-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(in reagent prepn.; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 183896-00-6P 259874-63-0P 259874-66-3P 259874-74-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in reagent prepn.; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-68-5P 259874-70-9P 259874-76-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(in reagent prepn.; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 59-23-4, Galactose, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
(protein expression in Saccharomyces cerevisiae grown in ethanol or; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 50-99-7, Glucose, miscellaneous
RL: MSC (Miscellaneous)
(protein expression in Saccharomyces cerevisiae grown in galactose or ethanol instead of; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 64-17-5, Ethanol, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
(protein expression in Saccharomyces cerevisiae grown in galactose or; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 9001-50-7, Glyceraldehyde-3-phosphate dehydrogenase
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 9013-20-1D, Streptavidin, agarose-immobilized
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(rapid quant. anal. of proteins or protein function in complex mixts.

using affinity labeling reagents and mass spectrometry)
IT 58-85-5D, **Biotin**, conjugates with labeled protein-reactive reagents 69-79-4D, Maltose, conjugates with labeled protein-reactive reagents 70-18-8D, Glutathione, conjugates with labeled protein-reactive reagents 71-00-1D, Histidine, oligo-, conjugates with labeled protein-reactive reagents, biological studies 139-13-9D, Nitrilotriacetic acid, conjugates with labeled protein-reactive reagents
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
IT 9001-92-7, Proteolytic enzyme
RL: ARU (Analytical role, unclassified); CAT (Catalyst use); ANST (Analytical study); USES (Uses)
(rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
IT 259874-57-2
RL: MSC (Miscellaneous)
(rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
IT 9012-36-6, Agarose
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(streptavidin immobilized on; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Adamczyk; US 5851781 A 1998 CAPLUS
(2) Berninger; US 5880270 A 1999 CAPLUS
(3) Dower; US 5958703 A 1999 CAPLUS
(4) Ghazarossian; US 5614368 A 1997 CAPLUS
(5) Griffiths; US 5965131 A 1999 CAPLUS
(6) Kientsch-Engel; US 5863740 A 1999 CAPLUS
(7) Magnani; US 5965457 A 1999 CAPLUS
(8) Markert-Hahn; US 5514559 A 1996 CAPLUS
(9) Schlieper; US 5658725 A 1997 CAPLUS
(10) Shoseyov; US 5738984 A 1998 CAPLUS
(11) Sigler; US 4798795 A 1989 CAPLUS
(12) Tom-Moy; US 5527711 A 1996 CAPLUS
(13) Vreeke; US 5534132 A 1996 CAPLUS

L15 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1999:255414 CAPLUS
DN 131:70769
TI Site-Specific Modification of a Single-Chain Antibody Using a Novel Glyoxylyl-Based Labeling Reagent
AU Zhao, Zhan G.; Im, Jin S.; Lam, Kit S.; Lake, Douglas F.
CS Arizona Cancer Center, Tucson, AZ, 85724, USA
SO Bioconjugate Chemistry (1999), 10(3), 424-430
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
CC 9-14 (Biochemical Methods)
Section cross-reference(s): 2, 3, 15
AB A novel, highly specific protein modification approach is described. By using conventional mol. cloning techniques, a protein can be constructed and expressed such that the N-terminal residue is replaced by cysteine. Its 1,2-aminothiol structure reacts very specifically with a glyoxylyl group at pH 7 or below, forming a relatively stable thiazolidine bridge. Therefore, a glyoxylyl-based labeling agent (e.g., radioactive tags, fluorescent probes, **biotin**) can be used to specifically modify a

protein at its N-terminus. To highlight this novel approach, a recombinant anti-insulin single chain antibody (scFv) was specifically biotinylated at its N-terminus even in the presence of other proteins in the total cell lysate. The glyoxylyl-biotinylated scFv retained binding activity similar to unmodified scFv.

ST antibody labeling glyoxylyl **biotin** reagent; single chain antibody cloning glyoxylyl labeling

IT Molecular cloning
(of scFv, putting cysteine residue at N-terminus; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)

IT Escherichia coli
(recombinant scFv expression in; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)

IT Antibodies
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(single chain; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)

IT 52-90-4, Cysteine, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
(at N-terminus of scFv, mol. cloning in prepn. of and labeling reagent reactive with; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)

IT 58-85-5, **Biotin** 108-30-5, Succinic anhydride, reactions 4246-51-9, 4,7,10-Trioxa-1,13-**tridecanediamine** 82911-69-1, Fmoc-OSu
RL: RCT (Reactant); RACT (Reactant or reagent)
(in prepn. of glyoxylyl reagent; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)

IT 172089-14-4P 228851-40-9DP, resin-bound 228851-41-0DP, resin-bound
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in prepn. of glyoxylyl reagent; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)

IT 228851-42-1DP, resin-bound
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and cleavage of, in prepn. of glyoxylyl reagent; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)

IT 228851-43-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and oxidn. of, in prepn. of glyoxylyl reagent; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)

IT 9004-10-8, Insulin, analysis
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(recombinant glyoxylyl-**biotin**-labeled scFv response to; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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(2) Atherton, E; Solid-Phase Peptide Synthesis A practical Approach 1989

(3) Ausubel, F; Current protocols in Molecular Biology 1989
(4) Ben-Bassat, A; J Bacteriol 1987, V169, P751 CAPLUS
(5) Brinkley, M; Perspectives in Bioconjugate Chemistry 1993, P59
(6) Disantos, C; Endocrinol 1988, V123, P1483
(7) Gaertner, H; Bioconjugate Chem 1992, V3, P262 CAPLUS
(8) Gaertner, H; Bioconjugate Chem 1996, V7, P38 CAPLUS
(9) Geoghegan, K; Bioconjugate Chem 1992, V3, P138 CAPLUS
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(11) Lake, D; Mol Immunol 1994, V31, P845 CAPLUS
(12) Loffex, A; Innovative and Perspectives in Solid-Phase Synthesis 1992, P77
(13) Meares, C; Perspectives in Bioconjugate Chemistry 1993, P1
(14) Meinnel, T; J Bacteriol 1995, V177, P1883 CAPLUS
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(19) Smyth, D; Biochem J 1964, V91, P589 CAPLUS
(20) Wetzel, R; Bioconjugate Chem 1990, V1, P114 CAPLUS
(21) Wingfield, P; Eur J Biochem 1989, V179, P565 CAPLUS
(22) Zhang, L; Anal Biochem 1996, V233, P87 CAPLUS
(23) Zhao, Z; J Chem Soc Chem Commun 1995, P1739 CAPLUS

L15 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1997:708440 CAPLUS
DN 127:298612
TI **Biotin** Reagents for Antibody Pretargeting. 2. Synthesis and in Vitro Evaluation of **Biotin** Dimers and Trimers for Crosslinking of Streptavidin
AU Wilbur, D. Scott; Pathare, Pradip M.; Hamlin, Donald K.; Weerawarna, S. Ananda
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(6), 819-832
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 26
AB Polymn. and/or crosslinking of recombinant streptavidin (r-SAv) with **biotin** derivs. contg. two **biotin** moieties (**biotin** dimers) or three **biotin** moieties (**biotin** trimers) has been investigated as a model for reagents to be used to increase the amt. of radioactivity on cancer cells in tumor pretargeting protocols. In the investigation, six **biotin** dimers and three **biotin** trimers were synthesized. Most **biotin** derivs. synthesized had ether contg. linker mols. incorporated to improve their aq. soly. The synthesized **biotin** dimers contained linker moieties which provided distances (when fully extended) of 13-49 .ANG. between **biotin** carboxylate carbon atoms, and the **biotin** trimers contained linker moieties which provided distances of 31-53 .ANG. between any two **biotin** carboxylate atoms. All of the **biotin** derivs. were evaluated for their ability to polymerize r-SAv in soln. When the **biotin** derivs. were mixed with r-SAv, none of the **biotin** dimers caused polymn., but all of the **biotin** trimers resulted in complete polymn. Some of the **biotin** dimers did cross-link r-SAv (to form r-SAv dimers, trimers, etc.), but the percentage of crosslinking was low (.ltoreq.40%). The length of the linker mol. was important in crosslinking of **biotin** dimers. While linkers which provided distances of 13 and 19 .ANG. between **biotin** carboxylate carbon atoms did not result in crosslinking, a linker which provided a 17 .ANG. distance resulted in a small

(.ltoreq.10%) amt. of crosslinking. Also, crosslinking was increased in **biotin** dimers with linkers which provided distances between **biotin** carboxylate carbon atoms of .gtoreq.23 .ANG.. Crosslinking of streptavidin bound in polystyrene wells with **biotin** dimers and trimers was also examd. In those expts., an excess of each **biotin** deriv. was incubated at 37 .degree.C for 10-30 min in polystyrene wells contg. bound SAv. After the excess **biotin** deriv. was rinsed from the wells, an excess of r-[125I]SAv was incubated for another 10-30 min. The amt. of r-[125I]SAv bound after rinsing the excess from the wells was an indicator of the extent of crosslinking that occurred. The process of alternating addns. of reagents was repeated four times to demonstrate that bound radioactivity could be increased with each addn. of [125I]SAv. The results of crosslinking r-SAv in polystyrene wells paralleled results from crosslinking in soln.

ST **biotin** oligomer prepn crosslinking streptavidin

IT Crosslinking agents
Immobilization, biochemical
(prepn. and in vitro evaluation of **biotin** dimers and trimers for crosslinking of streptavidin)

IT 9013-20-1, Streptavidin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(prepn. and in vitro evaluation of **biotin** dimers and trimers for crosslinking of streptavidin)

IT 58-85-5, **Biotin** 535-87-5, 3,5-Diaminobenzoic acid 929-59-9, 3,6-Dioxa-1,8-octanediamine 4246-51-9, 4,7,10-Trioxa-1,13-**tridecanediamine** 4422-95-1, 1,3,5-Benzenetricarbonyl trichloride 13887-98-4, 3,6,9-Trioxaundecanedioic acid 142685-25-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. and in vitro evaluation of **biotin** dimers and trimers for crosslinking of streptavidin)

IT 138529-46-1P 173341-32-7P 183896-00-6P 190250-18-1P 194920-45-1P 194920-46-2P 194920-54-2P 194920-55-3P 194920-56-4P 194920-58-6P 194920-64-4P 195152-91-1P 195152-92-2P 195152-94-4P 195152-96-6P 195152-98-8P 195152-99-9P 195153-00-5P 195370-62-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and in vitro evaluation of **biotin** dimers and trimers for crosslinking of streptavidin)

L15 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1997:542454 CAPLUS
DN 127:220519
TI Preparation of **biotin** containing compounds with water soluble linker moieties for use as radionuclides and streptavidin crosslinking agents
IN Wilbur, Scott D.; Pathare, Pradip M.; Weerawarna, S. Ananda; Hamlin, Donald K.
PA Board of Regents of the University of Washington, USA
SO PCT Int. Appl., 80 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07H015-00
ICS C12P013-18; C07D235-02; A01N043-52; A61K051-00
CC 26-9 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1, 7, 8, 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9729114	A1	19970814	WO 1997-US2560	19970207

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9720524 A1 19970828 AU 1997-20524 19970207
PRAI US 1996-11321P P 19960208
WO 1997-US2560 W 19970207

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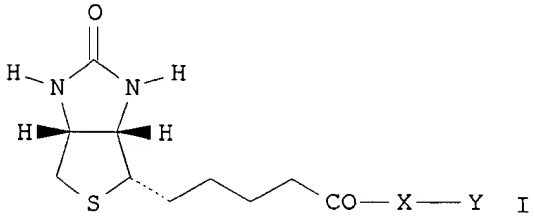

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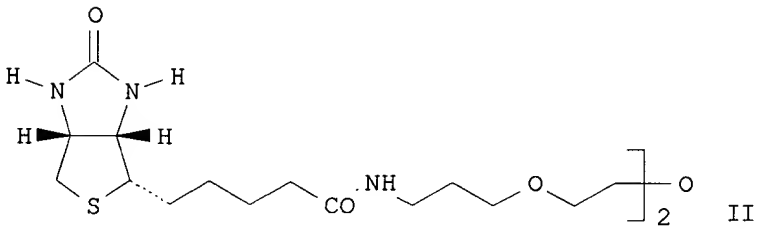

II

AB Water sol. **biotin**-contg. compds. and biotinylation reagents I {X = divalent water sol. linker such as NH(CH2)3O(CH2)2O(CH2)2O(CH2)3NH, trivalent water sol. linker such as 1,3,5-C6H3[CONH(CH2)3O(CH2)2O(CH2)2O(CH2)3NH]3; Y = reactive moiety such as 4-Bu3Sn-C6H4-CO; targeting, diagnostic, or therapeutic moiety such as 4-125I-C6H4-CO, **biotin**, or cyano-e-cobalamin} were prepd. for use as biotinylation reagents, biotinidase inhibitors (no data), and streptavidin cross linking agents. Thus, **biotin** dimer II was prepd. starting from **biotin** and 4,7,10-trioxa-1,13-**tridecanediamine** and was tested for streptavidin cross linking.

ST **biotin** compds prepn water soluble; biotinidase inhibitor water soluble **biotin** compd; streptavidin cross linking soluble **biotin** compd; biotinylation reagent soluble **biotin** compd; radionuclides water soluble **biotin** compd

IT Biotinylation
(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT Radionuclides, preparation
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT 194920-54-2P 194920-55-3P 194920-56-4P 194920-58-6P 194920-60-0P 194920-61-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT 9013-20-1, Streptavidin 9025-15-4, Biotinidase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT 58-85-5, **Biotin** 605-65-2, Dansyl chloride 929-59-9 1711-02-0, 4-Iodobenzoyl chloride 4246-51-9 4422-95-1, 1,3,5-Benzenetricarbonyl trichloride 4480-83-5, Diglycolic anhydride 13515-93-0, N-Methylglycine methyl ester hydrochloride 26264-28-8 55750-48-6, N-Methoxycarbonylmaleimide 142685-25-4, 2,3,5,6-Tetrafluorophenyl trifluoroacetate 172616-80-7 192720-54-0 194920-72-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT 153086-78-3P 154024-76-7P 173341-32-7P 175885-18-4P 183896-00-6P 188014-60-0P 192720-55-1P 192720-56-2P 194920-44-0P 194920-57-5P 194920-62-2P 194920-63-3P 194920-64-4P 194920-65-5P 194920-66-6P 194920-68-8P 194920-69-9P 194920-70-2P 194920-71-3P 194920-73-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT 183896-02-8P 194920-43-9P 194920-59-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT 189887-14-7P 194920-45-1P 194920-46-2P 194920-47-3P 194920-48-4P 194920-50-8P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

L15 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1997:433652 CAPLUS
DN 127:121587
TI **Biotin** reagents for antibody pretargeting. Synthesis, radioiodination and in vitro evaluation of water soluble, biotinidase resistant **biotin** derivatives
AU Wilbur, D. Scott; Hamlin, Donald K.; Pathare, Pradip M.; Weerawarna, S. Ananda
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(4), 572-584
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
CC 26-8 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1, 15, 63

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB An investigation was conducted to examine the stability of water solubilized, radioiodinated **biotin** derivs. toward biotinidase degrdn. in mouse and human serum as development of antibody pretargeting for cancer therapy. Eight new **biotin** derivs. were synthesized to conduct the study. The **biotin** derivs. synthesized contained (1) the **biotin** moiety, (2) a water solubilizing linker moiety, (3) p-iodobenzoate or p-tributylstannylbenzoate moieties, and (4) in some compds., N-Me or .alpha.-Me contg. moieties were added to block biotinidase activity. The linker moiety, 4,7,10-trioxa-1,13-**tridecanediamine** was included in the **biotin** derivs. to improve their water soly., and functioned as a 17 .ANG. spacer between the **biotin** and benzoyl moieties. Four of the new p-tributylstannylbenzoyl **biotin** derivs. I (R = H, Me; X = SnBu3), II (X = SnBu3), III (X = SnBu3) could be radioiodinated in the last synthetic step. The other four p-iodobenzoyl **biotin** derivs. I (R = H, Me; X = I), II (X = I), III (X = I) were used as HPLC ref. stds. Initial studies involved radioiodination of I (R = H; X = SnBu3) to yield [125I]-I (R = H; X = 125I). Radioiodinated I (R = H; X = I), did not contain a moiety for blocking biotinidase activity and was found to be rapidly degraded in both mouse and human serum at 37 .degree.C. Derivs. designed to be stable to biotinidase incorporated N-Me and .alpha.-Me moieties adjacent to the **biotin** carboxylate group. Linkers in the **biotin** derivs. were 4,7,10-trioxa-1,13-**tridecanediamine**, its N,N-di-Me analog or sarcosine (N-methylglycine). The radioiodinated N-Me contg. **biotin** derivs. I (R = Me; X = 125I) and II (X = 125I) were very stable to biotinidase degrdn. The radioiodinated .alpha.-Me contg. deriv., III (X = 125I), has an intermediate stability with regards to biotinidase degrdn.

ST radioiodinated **biotin** analog prepn stability; water soluble **biotin** analog prepn stability; biotinidase resistant **biotin** analog prepn; sarcosine benzoyltrioxadiamine **biotin** analog prepn

IT Antibodies
RL: PNU (Preparation, unclassified); PREP (Preparation)
(conjugates; prepn. of stable **biotin** analogs for antibody targeting)

IT Antitumor agents
(prepn. of stable **biotin** analogs for antibody targeting)

IT 192720-95-9P 192720-97-1P 192720-99-3P 192721-01-0P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis, radioiodination and in vitro evaluation of water sol., biotinidase resistant **biotin** derivs.)

IT 9025-15-4, Biotinidase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(synthesis, radioiodination and in vitro evaluation of water sol., biotinidase resistant **biotin** derivs.)

IT 541-48-0, 3-Aminobutyric acid 619-58-9, 4-Iodobenzoic acid 769-39-1, 2,3,5,6-Tetrafluorophenol 4246-51-9 13515-93-0, N-Methylglycine methyl ester hydrochloride 192720-58-4 192720-61-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis, radioiodination and in vitro evaluation of water sol., biotinidase resistant **biotin** derivs.)

IT 95708-93-3P 110345-46-5P 192720-53-9P 192720-54-0P 192720-55-1P

192720-56-2P 192720-63-1P 192720-64-2P 192720-67-5P 192720-72-2P
192720-74-4P 192720-76-6P 192720-78-8P 192720-81-3P 192720-83-5P
192720-85-7P 192720-86-8P 192720-93-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis, radioiodination and in vitro evaluation of water sol., biotinidase resistant **biotin** derivs.)

IT 192720-66-4P 192720-70-0P 192720-88-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis, radioiodination and in vitro evaluation of water sol., biotinidase resistant **biotin** derivs.)

L15 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1996:664622 CAPLUS
DN 126:3868
TI Antibody Fragments in Tumor Pretargeting. Evaluation of Biotinylated Fab' Colocalization with Recombinant Streptavidin and Avidin
AU Wilbur, D. Scott; Hamlin, Donald K.; Vessella, Robert L.; Stray, James E.; Buhler, Kent R.; Stayton, Patrick S.; Klumb, Lisa A.; Pathare, Pradip M.; Weerawarna, S. Ananda
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1996), 7(6), 689-702
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
CC 8-9 (Radiation Biochemistry)
Section cross-reference(s): 14
AB An evaluation of the use of a biotinylated monoclonal antibody Fab' fragment in tumor pretargeting was conducted. As a model system, tumor colocalization of avidin or recombinant streptavidin (r-streptavidin) and the biotinylated Fab' fragment (Fab'-S-**biotin**) of A6H, an antirenal cell carcinoma antibody, was evaluated in athymic mice bearing human renal cell carcinoma xenografts. A new water sol. sulfhydryl reactive biotinylation reagent, N-(13-N-maleimido-4,7,10-trioxatridecanyl)biotinamide, was synthesized and used for biotinylation of Fab'. A biodistribution of ChT-labeled A6H Fab'-S-**biotin** was conducted. Data from that distribution indicated that the Fab'-S-**biotin** localized well (i.e. 28% ID/g at 24 h) to human tumor xenografts in athymic mice. Subsequently, a biodistribution study involving pretargeting radioiodinated A6H Fab'-S-**biotin** to tumor xenografts, followed by administration of r-streptavidin at 4 or 20 h, was conducted. Specific colocalization of r-streptavidin to tumors contg. the A6H Fab'-S-**biotin** was evident from the data obtained. In a similar biodistribution study, specific colocalization of avidin to tumors pretargeted with A6H Fab'-S-**biotin** was also obsd. The avidin used in the study was radioiodinated with the N-hydroxysuccinimidyl ester of p-[125I]iodobenzoate ([125I]PIB-NHS). Very low concns. (e.g. 0.35% ID/g) of avidin colocalized at the tumor. To further show that specific colocalization within the tumor xenografts had occurred with biotinylated A6H Fab', radioiodinated avidin and r-streptavidin were co-injected into athymic mice bearing tumor xenografts to obtain their distributions without having biotinylated Fab' present. At 20 h postinjection, only small differences in the blood and tumor concns. of either protein were obsd., indicating that the specific tumor colocalization seen in the previous two biodistributions must have been due to the presence of Fab'-S-**biotin**. Calcns. were conducted to est. how much r-streptavidin (as a molar ratio) was colocalized. From the data obtained it was estd. that 36-61% of the tumor-localized Fab'-S-**biotin** mols. were bound with r-streptavidin and 4-23% bound with avidin, under the conditions studied.

ST tumor pretargeting biotinylated monoclonal antibody

IT Antibodies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(monoclonal, Fab', biotinylated; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT Avidins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT Kidney, neoplasm
(renal cell carcinoma; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 173341-32-7P 183896-00-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 4246-51-9, 4,7,10-Trioxa-1,13-**tridecanediamine** 55750-48-6, N-Methoxycarbonylmaleimide 142685-25-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 9013-20-1, Streptavidin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 58-85-5, **Biotin**
RL: RCT (Reactant); RACT (Reactant or reagent)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 183896-02-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

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(FILE 'HOME' ENTERED AT 12:48:52 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003
E AMINOISOPHTHALIC
L1 66 S E1-E6
L2 0 S FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003
L3 597 S L1
E BIOTIN
L4 22854 S E3
L5 15 S L3 AND L4
E LINKER
L6 12580 S E3
L7 17 S L3 AND L6
L8 10 S L5 AND L7
L9 7 S L7 NOT L5

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L10          71 S TRIDECANEDIAMINE
L11        6520 S AVIDIN
L12           3 S L10 AND L11
L13          15 S L10 AND L4
L14          12 S L13 NOT L5
L15          14 S L13 NOT L7
L16           2 S L15 NOT L14

=> e extracorporeal
E1            1     EXTRACORPORCALLY/BI
E2            2     EXTRACORPOREA/BI
E3         5268 --> EXTRACORPOREAL/BI
E4          133     EXTRACORPOREALLY/BI
E5            1     EXTRACORPOREALS/BI
E6            1     EXTRACORPORED/BI
E7            1     EXTRACORPOREL/BI
E8            1     EXTRACORPOREOL/BI
E9            1     EXTRACORPREAL/BI
E10          25     EXTRACORPUSCULAR/BI
E11          26     EXTRACORTICAL/BI
E12           1     EXTRACOTYLEDONARY/BI

=> s e3-e11
           5268 EXTRACORPOREAL/BI
            133 EXTRACORPOREALLY/BI
              1 EXTRACORPOREALS/BI
              1 EXTRACORPORED/BI
              1 EXTRACORPOREL/BI
              1 EXTRACORPOREOL/BI
              1 EXTRACORPREAL/BI
             25 EXTRACORPUSCULAR/BI
             26 EXTRACORTICAL/BI
L17        5404 (EXTRACORPOREAL/BI OR EXTRACORPOREALLY/BI OR EXTRACORPOREALS/BI
                OR EXTRACORPORED/BI OR EXTRACORPOREL/BI OR EXTRACORPOREOL/BI OR
                EXTRACORPREAL/BI OR EXTRACORPUSCULAR/BI OR EXTRACORTICAL/BI)

=> s l17 and l3
L18           4 L17 AND L3

=> d l18 1-4 all

L18  ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:523951  CAPLUS
DN   137:228855
TI   Trifunctional conjugation reagents. Reagents that contain a biotin and a
     radiometal chelation moiety for application to extracorporeal
     affinity adsorption of radiolabeled antibodies
AU   Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.;
     Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin
CS   Department of Radiation Oncology, University of Washington, Seattle, WA,
     98195, USA
SO   Bioconjugate Chemistry (2002), 13(5), 1079-1092
     CODEN: BCCHES; ISSN: 1043-1802
PB   American Chemical Society
DT   Journal
LA   English
CC   9-14 (Biochemical Methods)
     Section cross-reference(s): 8, 15, 63
AB   A method of removing radiolabeled monoclonal antibodies (mAbs) from blood
     using a device external to the body, termed extracorporeal
     affinity-adsorption (EAA), is being evaluated as a means of decreasing
     irradn. of noncancerous tissues in therapy protocols.  The EAA device uses
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an avidin column to capture biotinylated-radiolabeled mAbs from circulated blood. In this investigation, three trifunctional reagents have been developed to minimize the potential deleterious effect on antigen binding brought about by the combination of radiolabeling and biotinylation of mAbs required in the EAA approach. The studies focused on radiolabeling with 111In and 90Y, so the chelates CHX-A''-DTPA and DOTA, which form stable attachments to these radionuclides, were incorporated in the trifunctional reagents. The first trifunctional reagent prepd. did not incorporate a group to block the biotin cleaving enzyme biotinidase, but the two subsequent reagents coupled aspartic acid to the biotin carboxylate for that purpose. All three reagents used 4,7,10-trioxa-1,13-tridecanediamine as water-sol. spacers between an aminoisophthalate core and the biotin or chelation group. The mAb conjugates were radioiodinated to evaluate cell binding as a function of substitution. Radioiodination was used so that a direct comparison with unmodified mAb could be made. Evaluation of the no. of conjugates per antibody vs. cell binding immunoreactivities indicated that minimizing the no. of conjugates was best. Interestingly, a decrease of radioiodination yield as a function of the no. of isothiocyanate contg. conjugates per mAb was noted. The decreased yields were presumably due to the presence of thiourea functionality formed in the conjugation reaction. Radiolabeling with 111In and 90Y was facile at room temp. for conjugates contg. the CHX-A'', but elevated temp. (e.g., 45.degree.) was required to obtain good yields with the DOTA chelate. Stability of 90Y labeled mAb in serum, and when challenged with 10 mM EDTA, was high. However, challenging the 90Y labeled mAb with 10 mM DTPA demonstrated high stability for the DOTA contg. conjugate, but low stability for the CHX-A'' contg. conjugate. Thus, the choice between these two chelating moieties might be made on requirements for facile and gentle labeling vs. very high in vivo stability. Application of the trifunctional biotinylation reagents to the blood clearance of labeled antibodies in EAA is under investigation. The new reagents may also be useful for other applications.

ST trifunctional conjugation reagent biotin radiometal chelation

IT Antibodies
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(monoclonal; trifunctional conjugation reagents. reagents that contain biotin and radiometal chelation moiety for application to **extracorporeal** affinity adsorption of radiolabeled antibodies)

IT Affinity
Blood analysis
Blood serum
Chelation
(trifunctional conjugation reagents. reagents that contain biotin and radiometal chelation moiety for application to **extracorporeal** affinity adsorption of radiolabeled antibodies)

IT Chelates
Radionuclides, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(trifunctional conjugation reagents. reagents that contain biotin and radiometal chelation moiety for application to **extracorporeal** affinity adsorption of radiolabeled antibodies)

IT 10098-91-6, Yttrium-90, analysis 15750-15-9, Indium-111, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(trifunctional conjugation reagents. reagents that contain biotin and radiometal chelation moiety for application to **extracorporeal** affinity adsorption of radiolabeled antibodies)

IT **99-31-0** 127985-74-4 137174-07-3 178446-63-4 183896-00-6 194920-62-2 295322-53-1 459134-72-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(trifunctional conjugation reagents. reagents that contain biotin and radiometal chelation moiety for application to **extracorporeal**

affinity adsorption of radiolabeled antibodies)
IT 380607-61-4P 459134-70-4P 459134-73-7P 459134-74-8P 459134-75-9P
459134-76-0P 459409-35-9P 459409-37-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(trifunctional conjugation reagents. reagents that contain biotin and radiometal chelation moiety for application to **extracorporeal** affinity adsorption of radiolabeled antibodies)
IT 459134-77-1P 459134-78-2P 459409-36-0P 459409-38-2P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(trifunctional conjugation reagents. reagents that contain biotin and radiometal chelation moiety for application to **extracorporeal** affinity adsorption of radiolabeled antibodies)
RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L18 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2001:923565 CAPLUS
DN 136:42919
TI Biotin derivatives for an **extracorporeal** device
IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
PA Mitra Medical Technology AB, Swed.; University of Washington
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 26
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		
	W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2002159994	A1	20021031	US 2001-881213	20010615
	AU 2001074761	A5	20011224	AU 2001-74761	20010618
PRAI	SE 2000-2287	A	20000616		
	US 2000-216625P	P	20000707		
	WO 2001-SE1374	W	20010618		

AB A method for the conditioning of an **extracorporeal** device is described, as well as a method for **extracorporeal** extn. of toxic material from mammalian body fluids in connection with diagnosis or treatment of a mammalian condition or disease. The methods comprise (i) a soln. contg. a reagent comprising biotin moieties, such as natural biotin or its derivs., and a toxin-binding moiety, (ii) linkers and a trifunctional crosslinking moiety, and (ii) an **extracorporeal** device comprising said reagent. For example, a dibiotin compd., 1-isothiocyanato-3,5-bis-(13'-biotinamidyl-4',7',10'-trioxatridecanamidyl)-aminoisophthalate was prepd. and conjugated with a toxin-binding mol., i.e., monoclonal antibody 53-6A2. A dibiotin-toxin-binding conjugate was

used for conditioning of an avidin-agarose column suitable for removal of toxins from blood.

ST biotin deriv prepn reagent **extracorporeal** toxin extn; body fluid toxin extn **extracorporeal** biotin reagent

IT Histocompatibility antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HLA, antibodies against; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Imaging
(NMR; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids in diagnosis and therapy)

IT Intercalation
(agents; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Antibodies
RL: REM (Removal or disposal); PROC (Process)
(anti-blood group; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Blood-group substances
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antibodies against; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Avidins
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biotin derivs.-binding coatings; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Immunity
(cells involved in, removal of; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Avidins
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates, with agarose; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Animal cell
(diseased, removal of; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Toxins
RL: REM (Removal or disposal); PROC (Process)
(endotoxins; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Toxins
RL: REM (Removal or disposal); PROC (Process)
(enterotoxins; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Circulation
Extraction
(**extracorporeal**; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Chelating agents
(for radionuclides; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
IT Immunoglobulins
RL: REM (Removal or disposal); PROC (Process)
(fragments; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
IT Antibodies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monoclonal, conjugates, with dibiotin compd.; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
IT Antibodies
RL: REM (Removal or disposal); PROC (Process)
(monoclonal; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
IT Amino group
Blood
Body fluid
Carboxyl group
Chemotherapy
Cytotoxic agents
Dyes
Extraction columns
Hydroxyl group
(prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
IT Chelates
Cytokines
Metals, processes
Oligodeoxyribonucleotides
Peptides, processes
Radionuclides, processes
Toxins
Tumor necrosis factors
RL: REM (Removal or disposal); PROC (Process)
(prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
IT Diagnosis
(prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids in diagnosis and disease treatment)
IT Positron-emission tomography
Scintigraphy
(prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids in diagnosis and therapy)
IT Transplant and Transplantation
(prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids prior to transplantation)
IT Bacteria (Eubacteria)
Virus
(toxins; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
IT Disease, animal
(treatment; prepn. of biotin derivs. for conditioning of

extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and disease treatment)

IT Reagents
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tribiotinylated; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Neoplasm
(uptake, monitoring of; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Antibodies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(xenoantibodies, antibodies against; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 9013-20-1, Streptavidin
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biotin derivs.-binding coatings; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 9012-36-6D, Agarose, conjugates with avidin
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 58-85-5, Biotin **99-31-0**, 5-Aminoisophthalic acid 4246-51-9, 4,7,10,Trioxa-1,13-tridecanediamine 24424-99-5, Di-tert-butyl dicarbonate 142685-25-4, 2,3,5,6-Tetrafluorophenyl trifluoroacetate 380607-49-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 173341-32-7P 178446-63-4P 183896-00-6P 380607-50-1P 380607-51-2P 380607-56-7P 380607-60-3P 380607-61-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 380607-52-3P 380607-54-5P
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 194920-56-4P 194920-58-6P 380607-48-7P 380607-52-3DP, conjugates with monoclonal antibodies 380607-53-4P 380607-55-6P 380607-57-8P 380607-58-9P 380607-59-0P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 533-48-2, Desthiobiotin 535-87-5, 3,5-Diaminobenzoic acid 554-95-0, 1,3,5-Benzene tricarboxylic acid 669-72-7, Nor-biotin 1784-22-1, Homobiotin 3376-83-8, Biotin sulfoxide 13395-35-2, Iminobiotin 14474-91-0, Oxybiotin 22342-46-7, Diaminobiotin 40720-05-6, Biotin sulfone
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 58-85-5D, Biotin, derivs.

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (radiolabeled; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

L18 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2000:35037 CAPLUS
DN 132:90367
TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy
IN Wilbur, D. Scott; Sandberg, Bengt E. B.
PA Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N033-543
ICS A61K039-00; A61K047-48; A61K051-00; A61K049-00
CC 9-15 (Biochemical Methods)
Section cross-reference(s): 1, 8, 15, 63
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	US 2001023288	A1	20010920	US 2000-750280	20001229
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

AB A reagent for conjugation to a biomol. for diagnosis and treatment of human and animal conditions and diseases is described, wherein the reagent is a single mol. with at least three functional parts and a) wherein a trifunctional crosslinking moiety is coupled to b) an affinity ligand via a linker 1, said affinity ligand being capable of binding with another mol. having affinity for said ligand; to c) an effector agent, optionally via a linker 2, said effector agent exerting its effects on cells, tissues and/or humorous mols. in vivo or ex vivo; and to d) a biomol. reactive

moiety, optionally via a linker 3, said moiety being capable of forming a bond between the reagent and the biomol. The affinity ligand is esp. biotin or a biotin deriv. The effector agent is a toxin, an enzyme capable of converting a prodrug to an active drug, an immunosuppressant, an immunostimulant, or a radionuclide-binding agent, with or without the radionuclide.

ST trifunctional reagent biomol conjugation diagnosis therapy; biotin trifunctional reagent biomol conjugate diagnosis therapy; toxin trifunctional reagent biomol conjugate therapy; prodrug converting enzyme trifunctional reagent conjugate; immunomodulator trifunctional reagent conjugate; radiotherapy trifunctional reagent conjugate; imaging agent trifunctional reagent conjugate

IT Imaging agents
(NMR contrast, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Imaging agents
(acoustic imaging contrast agents, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(affinity ligand-binding, for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Ligands
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(affinity, trifunctional reagent contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Functional groups
(ammonio group, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Chromophores
Fluorescent substances
(as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Separators
(blood plasma, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Amines, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(cyclic, radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Lung, disease
(embolism; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Carboxylic acids, properties
RL: PRP (Properties)
(esters, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Adsorption apparatus
(**extracorporeal**, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation
(**extracorporeal**, nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Affinity chromatographic stationary phases
(for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Imaging
(gamma-ray; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Vinyl compounds, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(halo, halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Aryl halides
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Avidins
Receptors
RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immobilized, **extracorporeal** adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Heart, disease
(infarction; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Ethers, properties
Sulfonates
Thioethers
RL: PRP (Properties)
(linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Circulation
(nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Radiosensitizers, biological
(pharmaceutical, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Materials
(photoactive chems., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Enzymes, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(prodrug-metabolizing, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis

and therapy)
IT Drug delivery systems
(prodrugs, trifunctional reagent contg. enzymes metabolizing; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Brain, disease
(stroke; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Radiotherapy
(targeted; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Disease, animal
(treatment of; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Avidins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Body fluid
(trifunctional reagent contg. effector agent acting on mols. in; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Animal tissue
Cell
(trifunctional reagent contg. effector agent acting on; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Radionuclides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent contg. moieties binding to, as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Immunostimulants
Immunosuppressants
(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Enzymes, biological studies
Hormones, animal, biological studies
Toxins
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Animal
Atherosclerosis
Biochemical molecules
Diagnosis
Drug targeting
Mammal (Mammalia)
Neoplasm
Photodynamic therapy
Photoimaging
Positron-emission tomography
Therapy
Vertebrate (Vertebrata)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Reagents
RL: ARG (Analytical reagent use); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Crosslinking agents
(trifunctional; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Thrombosis
(venous, deep; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT Imaging agents
(x-ray, contrast, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT 9025-15-4, Biotinidase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(biotin-contg. reagent with stability against cleavage with; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT 7439-92-1D, Lead, radionuclides, biological studies 7439-94-3D, Lutetium, radionuclides, biological studies 7440-19-9D, Samarium, radionuclides, biological studies 7440-50-8D, Copper, radionuclides, biological studies 7440-65-5D, Yttrium, radionuclides, biological studies 7440-69-9D, Bismuth, radionuclides, biological studies 7440-74-6D, Indium, radionuclides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(cyclic amines binding to, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT 15715-08-9, Iodine-123, biological studies 15750-15-9, Indium-111, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT 13981-56-1, Fluorine-18, biological studies 14158-30-6, Iodine-124, biological studies 14809-47-3, Bromine-75, biological studies 15765-38-5, Bromine-76, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for positron imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
IT 10043-66-0, Iodine-131, biological studies 10098-91-6, Yttrium-90, biological studies 14265-75-9, Lutetium-177, biological studies 14378-26-8, Rhenium-188, biological studies 14913-49-6, Bismuth-212, biological studies 14998-63-1, Rhenium-186, biological studies 15623-45-7, Radium-223, biological studies 15755-39-2, Astatine-211, biological studies 15757-86-5, Copper-67, biological studies 15776-20-2, Bismuth-213, biological studies 29687-57-8, Samarium-157, biological studies

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1D, Streptavidin, immobilized
RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**extracorporeal** adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 14133-76-7, Technetium-99, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(metastable, effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-55-0, Indium-114, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(metastable, effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 60-00-4D, EDTA, derivs. 67-43-6D, DTPA, derivs. 3565-84-2 56491-86-2, NOTA 60239-18-1, DOTA 60239-22-7, TETA 254441-22-0
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1, Streptavidin
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 58-85-5D, Biotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety **99-31-0D**, 3,5-Dicarboxyaniline, conjugates with affinity ligand and effector agent and biomol. reactive moiety 108-72-5D, 1,3,5-Triaminobenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety 533-48-2D, Desthiobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 535-87-5D, 3,5-Diaminobenzoic acid, conjugates with affinity ligand and effector agent and biomol. reactive moiety 554-95-0D, 1,3,5-Tricarboxybenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety 669-72-7D, Norbiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 1784-22-1D, Homobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 3376-83-8D, Biotin sulfoxide, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 13395-35-2D, Iminobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 14474-91-0D, Oxybiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 22342-46-7D, Diaminobiotin, conjugates with crosslinking

agent binding to effect agent and to biomol. reactive moiety
40720-05-6D, Biotin sulfone, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 254441-23-1 254441-24-2D, derivs. 254441-25-3 254441-26-4 254441-28-6 254447-29-5 254447-31-9
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L18 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2000:35036 CAPLUS
DN 132:90366
TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy

IN Wilbur, D. Scott; Sandberg, Bengt E. B.
PA Department of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB

SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English

IC ICM G01N033-543
ICS C07K019-00; A61K039-395; A61K047-48; A61K051-00; A61K049-00
CC 9-15 (Biochemical Methods)
Section cross-reference(s): 1, 8, 15, 63

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9883663	A1	20000124	AU 1998-83663	19980707
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,				

LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU	9950767	A1	20000124	AU 1999-50767	19990707
EP	1095274	A1	20010502	EP 1999-935251	19990707
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP	2002519440	T2	20020702	JP 2000-558395	19990707
NO	2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

AB A reagent for conjugation to a biomol. for diagnosis and treatment of human and animal conditions and diseases is described, wherein the reagent is a single mol. with at least three functional parts and a) wherein a trifunctional crosslinking moiety is coupled to b) an affinity ligand via a linker 1, said affinity ligand being capable of binding with another mol. having affinity for said ligand; to c) an effector agent, optionally via a linker 2, said effector agent exerting its effects on cells, tissues and/or humorous mols. in vivo or ex vivo; and to d) a biomol. reactive moiety, optionally via a linker 3, said moiety being capable of forming a bond between the reagent and the biomol. The affinity ligand is esp. biotin or a biotin deriv. The effector agent is a toxin, an enzyme capable of converting a prodrug to an active drug, an immunosuppressant, an immunostimulant, or a radionuclide-binding agent, with or without the radionuclide.

ST trifunctional reagent biomol conjugation diagnosis therapy; biotin trifunctional reagent biomol conjugate diagnosis therapy; toxin trifunctional reagent biomol conjugate therapy; prodrug converting enzyme trifunctional reagent conjugate; immunomodulator trifunctional reagent conjugate; radiotherapy trifunctional reagent conjugate; imaging agent trifunctional reagent conjugate

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(affinity ligand-binding, for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Ligands
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(affinity, trifunctional reagent contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Functional groups
(ammonio group, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Separators
(blood plasma, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Amines, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(cyclic, radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Lung, disease

(embolism; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Carboxylic acids, properties
RL: PRP (Properties)
(esters, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Adsorption apparatus
(**extracorporeal**, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation
(**extracorporeal**, nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Affinity chromatographic stationary phases
(for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Imaging
(gamma-ray; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Vinyl compounds, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(halo, halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Aryl halides
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Avidins
Receptors
RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immobilized, **extracorporeal** adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Heart, disease
(infarction; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Ethers, properties
Sulfonates
Thioethers
RL: PRP (Properties)
(linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation
(nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(prodrug-metabolizing, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Drug delivery systems
(prodrugs, trifunctional reagent contg. enzymes metabolizing; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Brain, disease
(stroke; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radiotherapy
(targeted; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Disease, animal
(treatment of; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Avidins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Body fluid
(trifunctional reagent contg. effector agent acting on mols. in; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal tissue
Cell
(trifunctional reagent contg. effector agent acting on; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radionuclides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent contg. moieties binding to, as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Immunostimulants
Immunosuppressants
(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies
Toxins
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal
Atherosclerosis
Biochemical molecules
Diagnosis
Drug targeting
Mammal (Mammalia)
Neoplasm
Positron-emission tomography
Therapy
Vertebrate (Vertebrata)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Reagents

RL: ARG (Analytical reagent use); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Crosslinking agents
(trifunctional; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Thrombosis
(venous, deep; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9025-15-4, Biotinidase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(biotin-contg. reagent with stability against cleavage with; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 7439-92-1D, Lead, radionuclides, biological studies 7439-94-3D, Lutetium, radionuclides, biological studies 7440-19-9D, Samarium, radionuclides, biological studies 7440-50-8D, Copper, radionuclides, biological studies 7440-65-5D, Yttrium, radionuclides, biological studies 7440-69-9D, Bismuth, radionuclides, biological studies 7440-74-6D, Indium, radionuclides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(cyclic amines binding to, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 15715-08-9, Iodine-123, biological studies 15750-15-9, Indium-111, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-56-1, Fluorine-18, biological studies 14158-30-6, Iodine-124, biological studies 14809-47-3, Bromine-75, biological studies 15765-38-5, Bromine-76, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for positron imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 10043-66-0, Iodine-131, biological studies 10098-91-6, Yttrium-90, biological studies 14265-75-9, Lutetium-177, biological studies 14378-26-8, Rhenium-188, biological studies 14913-49-6, Bismuth-212, biological studies 14998-63-1, Rhenium-186, biological studies 15623-45-7, Radium-223, biological studies 15755-39-2, Astatine-211, biological studies 15757-86-5, Copper-67, biological studies 15776-20-2, Bismuth-213, biological studies 29687-57-8, Samarium-157, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for radiotherapy;

trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1D, Streptavidin, immobilized
RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**extracorporeal** adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 14133-76-7, Technetium-99, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(metastable, effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-55-0, Indium-114, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(metastable, effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 60-00-4D, EDTA, derivs. 67-43-6D, DTPA, derivs. 3565-84-2 56491-86-2, NOTA 60239-18-1, DOTA 60239-22-7, TETA 254441-22-0
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1, Streptavidin
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 58-85-5D, Biotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety **99-31-0D**, 3,5-Dicarboxyaniline, conjugates with affinity ligand and effector agent and biomol. reactive moiety 108-72-5D, 1,3,5-Triaminobenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety 533-48-2D, Desthiobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 535-87-5D, 3,5-Diaminobenzoic acid, conjugates with affinity ligand and effector agent and biomol. reactive moiety 554-95-0D, 1,3,5-Tricarboxybenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety 669-72-7D, Norbiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 1784-22-1D, Homobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 3376-83-8D, Biotin sulfoxide, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 13395-35-2D, Iminobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 14474-91-0D, Oxybiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 22342-46-7D, Diaminobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 40720-05-6D, Biotin sulfone, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 254441-23-1 254441-24-2D, derivs. 254441-25-3 254441-26-4 254441-28-6 254447-29-5
RL: ARG (Analytical reagent use); BPR (Biological process); BSU

(Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Beckman Instruments Inc; EP 0310361 A2 1989 CAPLUS
(2) Board Of Regents Of The University Of Washington; WO 9729114 A1 1997 CAPLUS
(3) Boehringer Mannheim Gmbh; EP 0618192 A1 1994 CAPLUS
(4) Cancer Research Campaign Technology Limited; WO 8910140 A1 1989 CAPLUS
(5) Gaetjens, E; US 5134071 A 1992 CAPLUS
(6) Hybritech Incorporated; WO 9302105 A1 1993 CAPLUS
(7) Immunomedics Inc; WO 9604313 A1 1996 CAPLUS
(8) Jacobson, K; US 5310916 A 1994 CAPLUS
(9) Muzykantov, V; Proc Natl Acad Sci 1996, V93, P5213 CAPLUS
(10) Otusji, E; 1997, 20, CAPLUS
(11) Otusji, E; Cancer Res 1997, V88(2), P205 CAPLUS

=> d l18 1-4

L18 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2002:523951 CAPLUS
DN 137:228855
TI Trifunctional conjugation reagents. Reagents that contain a biotin and a radiometal chelation moiety for application to **extracorporeal** affinity adsorption of radiolabeled antibodies
AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.; Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (2002), 13(5), 1079-1092
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2001:923565 CAPLUS
DN 136:42919
TI Biotin derivatives for an **extracorporeal** device
IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
PA Mitra Medical Technology AB, Swed.; University of Washington
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		

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     US 2002159994     A1   20021031       US 2001-881213   20010615
     AU 2001074761     A5   20011224       AU 2001-74761    20010618
PRAI SE 2000-2287      A    20000616
     US 2000-216625P   P    20000707
     WO 2001-SE1374    W    20010618

L18  ANSWER 3 OF 4  CAPLUS  COPYRIGHT 2003 ACS
AN   2000:35037  CAPLUS
DN   132:90367
TI   Trifunctional reagent for conjugation to a biomolecule for use in
     diagnosis and therapy
IN   Wilbur, D. Scott; Sandberg, Bengt E. B.
PA   Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical
     Technology AB
SO   PCT Int. Appl., 48 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 2
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
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PI   WO 2000002051     A1   20000113       WO 1999-SE1241   19990707
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             HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
             LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,
             SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU,
             ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
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             CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     WO 2000002050     A1   20000113       WO 1998-SE1345   19980707
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             CM, GA, GN, ML, MR, NE, SN, TD, TG
     CA 2336739        AA   20000113       CA 1999-2336739  19990707
     AU 9950767        A1   20000124       AU 1999-50767    19990707
     EP 1095274        A1   20010502       EP 1999-935251   19990707
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             IE, SI, LT, LV, FI, RO
     JP 2002519440     T2   20020702       JP 2000-558395   19990707
     US 2001023288     A1   20010920       US 2000-750280   20001229
     NO 2001000021     A    20010307       NO 2001-21       20010103
PRAI WO 1998-SE1345    A    19980707
     WO 1999-SE1241    W    19990707
RE.CNT  13    THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18  ANSWER 4 OF 4  CAPLUS  COPYRIGHT 2003 ACS
AN   2000:35036  CAPLUS
DN   132:90366
TI   Trifunctional reagent for conjugation to a biomolecule for use in
     diagnosis and therapy
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IN   Wilbur, D. Scott; Sandberg, Bengt E. B.
PA   Department of Radiation Oncology, University of Washington, USA; Mitra
     Medical Technology AB
SO   PCT Int. Appl., 41 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 2
     PATENT NO.         KIND  DATE           APPLICATION NO.  DATE
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PI   WO 2000002050      A1    20000113       WO 1998-SE1345   19980707
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             CM, GA, GN, ML, MR, NE, SN, TD, TG
     AU 9883663          A1    20000124       AU 1998-83663    19980707
     CA 2336739          AA    20000113       CA 1999-2336739  19990707
     WO 2000002051       A1    20000113       WO 1999-SE1241   19990707
         W:  AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU,
             CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM,
             HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
             LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,
             SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU,
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             CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     AU 9950767          A1    20000124       AU 1999-50767    19990707
     EP 1095274          A1    20010502       EP 1999-935251   19990707
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     JP 2002519440       T2    20020702       JP 2000-558395   19990707
     NO 2001000021       A     20010307       NO 2001-21       20010103
PRAI WO 1998-SE1345      A     19980707
     WO 1999-SE1241      W     19990707
RE.CNT  11    THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


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     FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003
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L1            66 S E1-E6
L2             0 S FILE CAPLUS

     FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003
L3           597 S L1
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L4         22854 S E3
L5            15 S L3 AND L4
                E LINKER
L6         12580 S E3
L7            17 S L3 AND L6
L8            10 S L5 AND L7
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L9            7 S L7 NOT L5
L10          71 S TRIDECANEDIAMINE
L11        6520 S AVIDIN
L12           3 S L10 AND L11
L13          15 S L10 AND L4
L14          12 S L13 NOT L5
L15          14 S L13 NOT L7
L16           2 S L15 NOT L14
                E EXTRACORPOREAL
L17        5404 S E3-E11
L18           4 S L17 AND L3

=> s l17 and l10
L19           2 L17 AND L10

=> s l19 not l18
L20           0 L19 NOT L18

=> s l10 and l6
L21          13 L10 AND L6

=> dl21 1-13
DL21 IS NOT A RECOGNIZED COMMAND
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For a list of commands available to you in the current file, enter
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L21  ANSWER 1 OF 13  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:778699  CAPLUS
DN   137:299916
TI   Peptide-containing compounds for targeting cells expressing NP-1 receptor
IN   Von Wronski, Mathew A.; Marinelli, Edmund R.; Nunn, Adrian D.; Pillai,
     Radhakrishna; Ramalingam, Kondareddiar; Tweedle, Michael F.; Linder,
     Karen; Nanjappan, Palaniappa; Raju, Natarajan
PA   USA
SO   U.S. Pat. Appl. Publ., 85 pp., Cont.-in-part of U.S. Ser. No. 585,364.
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 2
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
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PI   US 2002147136      A1   20021010       US 2001-871974   20010604
PRAI US 2000-585364     A2   20000602
OS   MARPAT 137:299916

L21  ANSWER 2 OF 13  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:534031  CAPLUS
DN   137:93597
TI   Preparation and use of phenoxyalkylamino-linked dimers as sodium channel
     modulators
IN   Marquess, Daniel; Choi, Seok-ki; Beattie, David T.; Griffin, John H.;
     Armstrong, Scott; Church, Timothy J.; Jenkins, Thomas E.
PA   Advanced Medicine, Inc., USA
SO   U.S., 121 pp., Cont.-in-part of U. S. Ser. No. 325,563, abandoned.
     CODEN: USXXAM
DT   Patent
LA   English
FAN.CNT 25
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
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PI   US 6420354        B1   20020716       US 1999-458107   19991208
     CA 2318806        AA   19991216       CA 1999-2318806  19990607
     CA 2319142        AA   19991216       CA 1999-2319142  19990607
     CA 2319153        AA   19991216       CA 1999-2319153  19990607
     WO 9963984        A1   19991216       WO 1999-US11801  19990607
         W:  AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
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             JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
             MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
             TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,
             MD, RU, TJ, TM
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             CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     WO 9963932        A2   19991216       WO 1999-US12724  19990607
     WO 9963932        A3   20000203
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             JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
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             TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,
             MD, RU, TJ, TM
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             ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
             CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     WO 9964045        A1   19991216       WO 1999-US12754  19990607
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             MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
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             MD, RU, TJ, TM
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             CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     AU 9945511        A1   19991230       AU 1999-45511    19990607
     AU 9946726        A    19991230       AU 1999-46726    19990607
     EP 1085879        A2   20010328       EP 1999-928442   19990607
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
     EP 1085890        A1   20010328       EP 1999-930122   19990607
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
     EP 1089749        A1   20010411       EP 1999-928447   19990607
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
     JP 2002517437     T2   20020618       JP 2000-553053   19990607
     US 6479498        B1   20021112       US 2001-39699    20011109
PRAI US 1998-88465P    P    19980608
     US 1998-93068P    P    19980716
     US 1999-325563    B2   19990604
     WO 1999-US11801   W    19990607
     WO 1999-US12724   W    19990607
     WO 1999-US12754   W    19990607
     US 1999-458107    A1   19991208
OS   MARPAT 137:93597
RE.CNT  59    THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21  ANSWER 3 OF 13  CAPLUS  COPYRIGHT 2003 ACS
AN   2001:885834  CAPLUS
```

DN 136:25104
TI Peptide-containing compounds for targeting endothelial cells, compositions containing the same and methods for their use
IN Von Wronski, Mathew A.; Marinelli, Edmund R.; Nunn, Adrian D.; Pillai, Radhakrishna; Ramalingam, Kondareddiar; Tweedle, Michael F.; Linder, Karen; Nanjappan, Palaniappa; Raju, Natarajan
PA Bracco Research USA, USA
SO PCT Int. Appl., 146 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001091805	A2	20011206	WO 2001-US18053	20010604

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 2000-585364 A2 20000602
OS MARPAT 136:25104

L21 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 2001:640098 CAPLUS
TI Drug delivery and selective targeting by vitamin B12 derivatives
AU Reinhard, Kathryn S.; Gao, Xiang; Chaung, Danny K.; Wilson, Stephen R.
CS Department of Chemistry, New York University, New York, NY, 10003, USA
SO Abstracts of Papers, 222nd ACS National Meeting, Chicago, IL, United States, August 26-30, 2001 (2001), MEDI-279 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69BUZP
DT Conference; Meeting Abstract
LA English

L21 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 2001:284303 CAPLUS
DN 135:42876
TI Peptide and small molecule microarray for high throughput cell adhesion and functional assays
AU Falsey, James R.; Renil, M.; Park, Steven; Li, Shijun; Lam, Kit S.
CS UC Davis Cancer Center Division of Hematology/Oncology and Department of Internal Medicine, University of California Davis, Sacramento, CA, 95817, USA
SO Bioconjugate Chemistry (2001), 12(3), 346-353
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 2001:201927 CAPLUS
TI Synthesis and evaluation of protein biotinylation reagents that also contain UV and/or fluorescence absorbing moieties
AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Sandberg, Bengt E. B.

CS Radiation Oncology, University of Washington, Seattle, WA, 98103, USA
SO Abstr. Pap. - Am. Chem. Soc. (2001), 221st, MEDI-031
CODEN: ACSRAL; ISSN: 0065-7727
PB American Chemical Society
DT Journal; Meeting Abstract
LA English

L21 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 2000:145059 CAPLUS
DN 132:191408
TI Rapid quantitative analysis of proteins or protein function in complex mixtures using affinity labeling reagents and mass spectrometry
IN Aebersold, Rudolf Hans; Gelb, Michael H.; Gygi, Steven P.; Scott, C. Ronald; Turecek, Frantisek; Gerber, Scott A.; Rist, Beate
PA University of Washington, USA
SO PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000011208	A1	20000302	WO 1999-US19415	19990825
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	AU 9956913	A1	20000314	AU 1999-56913	19990825
	EP 1105517	A1	20010613	EP 1999-943915	19990825
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002523058	T2	20020730	JP 2000-566460	19990825
	JP 3345401	B2	20021118		
	US 2002076739	A1	20020620	US 2001-839884	20010420
PRAI	US 1998-97788P	P	19980825		
	US 1998-99113P	P	19980903		
	US 1999-383062	A3	19990825		
	WO 1999-US19415	W	19990825		

OS MARPAT 132:191408
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 2000:142691 CAPLUS
DN 132:302964
TI High-Affinity Pentavalent Ligands of Escherichia coli Heat-Labile Enterotoxin by Modular Structure-Based Design
AU Fan, Erkang; Zhang, Zhongsheng; Minke, Wendy E.; Hou, Zheng; Verlinde, Christophe L. M. J.; Hol, Wim G. J.
CS Department of Biological Structure Biomolecular Structure Center and Howard Hughes Medical Institute, University of Washington, Seattle, WA, 98195, USA
SO Journal of the American Chemical Society (2000), 122(11), 2663-2664
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 1999:369591 CAPLUS
DN 131:116513

TI Efficient assembly of peptomers on continuous surfaces
AU Ast, Thomas; Heine, Niklas; Germeroth, Lothar; Schneider-Mergener, Jens; Wenschuh, Holger
CS Institut fur Medizinische Immunologie, Universitatsklinikum Charite, Humboldt-Universitat zu Berlin, Berlin, 10098, Germany
SO Tetrahedron Letters (1999), 40(23), 4317-4318
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 1997:708440 CAPLUS
DN 127:298612
TI Biotin Reagents for Antibody Pretargeting. 2. Synthesis and in Vitro Evaluation of Biotin Dimers and Trimers for Crosslinking of Streptavidin
AU Wilbur, D. Scott; Pathare, Pradip M.; Hamlin, Donald K.; Weerawarna, S. Ananda
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(6), 819-832
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

L21 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 1997:542454 CAPLUS
DN 127:220519
TI Preparation of biotin containing compounds with water soluble **linker** moieties for use as radionuclides and streptavidin crosslinking agents
IN Wilbur, Scott D.; Pathare, Pradip M.; Weerawarna, S. Ananda; Hamlin, Donald K.
PA Board of Regents of the University of Washington, USA
SO PCT Int. Appl., 80 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9729114	A1	19970814	WO 1997-US2560	19970207
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	AU 9720524	A1	19970828	AU 1997-20524	19970207
PRAI	US 1996-11321P	P	19960208		
	WO 1997-US2560	W	19970207		

L21 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 1997:433652 CAPLUS
DN 127:121587
TI Biotin reagents for antibody pretargeting. Synthesis, radioiodination and in vitro evaluation of water soluble, biotinidase resistant biotin

derivatives
AU Wilbur, D. Scott; Hamlin, Donald K.; Pathare, Pradip M.; Weerawarna, S. Ananda
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(4), 572-584
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

L21 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 1997:155067 CAPLUS
DN 126:207193
TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon; Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(2), 161-172
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

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L1 66 S E1-E6
L2 0 S FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003
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L4 22854 S E3
L5 15 S L3 AND L4
E LINKER
L6 12580 S E3
L7 17 S L3 AND L6
L8 10 S L5 AND L7
L9 7 S L7 NOT L5
L10 71 S TRIDECANEDIAMINE
L11 6520 S AVIDIN
L12 3 S L10 AND L11
L13 15 S L10 AND L4
L14 12 S L13 NOT L5
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L16 2 S L15 NOT L14
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L17 5404 S E3-E11
L18 4 S L17 AND L3
L19 2 S L17 AND L10
L20 0 S L19 NOT L18
L21 13 S L10 AND L6

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	205.04	239.75

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-16.93	-16.93

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